

DISTRICT PLANNING IN INDIA



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FOREWORD

The problem of district planning is vital not only for the future of development planning in India but also for the future design of Indian administration. For the effective implementation of development plans depends not only on our methods of planning but also, as this volume emphasises, on the system of administration.

The search for a viable strategy of spatial planning goes as far back as our initial experiments with community development projects during the early fifties. Nevertheless the full impact of integrated area planning is yet to be felt in our development experience. At least one of the important reasons for this is the paucity of appropriate research on planning methods which are suitable for the Indian environment. Far too much emphasis is laid on esoteric problems of model building which seem to be far removed from the real issues of rural development in this country, in particular the important question of establishing functionality between district planning and our system of field administration.

This is in fact the central concern of the present volume, where the author has tried to organise observations from the field into a firm theoretical formulation. And it is my hope that the volume will help to redirect the attention of researchers, policy makers and administrators towards some of these fundamental issues.

NEW DELHI
JANUARY 18, 1977

R.N. HALDIPUR
Director
INDIAN INSTITUTE OF PUBLIC
ADMINISTRATION

PREFACE

The notion of the district as a spatial unit of planning within a system of multi-level planning had come to be widely accepted by the end of the sixties. Some pilot experiments had already been conducted. A considerable volume of official as well as unofficial literature on the subject was also available by this time. And the Planning Commission even issued a set of guidelines to the States on the formulation of district Plans in connection with the Fourth Plan. But by the beginning of the Fifth Plan a feeling was in the air that the approach had fallen short of expectations.

In the course of this summary trial and judgement by default, a number of important questions regarding the desirability and practical feasibility of district planning, especially in the processes of implementing this strategy, remained unanswered. No systematic analysis of the results of the initial experiment was attempted. No answers were forthcoming as to whether the approach turned out to be disappointing because of tactical errors or whether it is a fundamentally non-viable strategy.

The present volume attempts to provide such an answer, however tentative, for it is easy to see that the above question is of central importance for the future design of field administration in India. The search for worthwhile answers naturally had to go beyond theoretical speculations and draw upon actual field experiences with district planning. But at the same time it was essential to organise this empirical material within a suitable theoretical framework in order to derive what I hope are useful insights. This is the basic methodological postulate of the present study.

The original field studies, on which the book is based, were completed in 1974. However, it has been my good fortune to learn a great deal during the past few years from numerous field trips, not directly connected with the original project, which have taken me to different parts of the country, especially, the States of Maharashtra, Gujarat, Bihar, West Bengal, Haryana and western

Uttar Pradesh. The present volume is thus the cumulative outcome of what I have seen and learned from the field during this period. Throughout this period innumerable officers in various capacities extended not only their cooperation but also their hospitality in addition to filling questionnaires, tracking down data, etc. It is my regret that for reasons of anonymity I am unable to acknowledge them individually. Financial help from the Indian Council of Social Science Research is also gratefully acknowledged.

The study was presented to the faculty at a seminar at the IIPA. I have benefited from a number of useful comments at this seminar, as well as from individual members of the faculty who are researching in related problems. I am also greatly indebted to Dr. Lalit Sen who read through the entire manuscript and offered his suggestions. Of course, none of these persons can be held responsible for the views expressed in this volume.

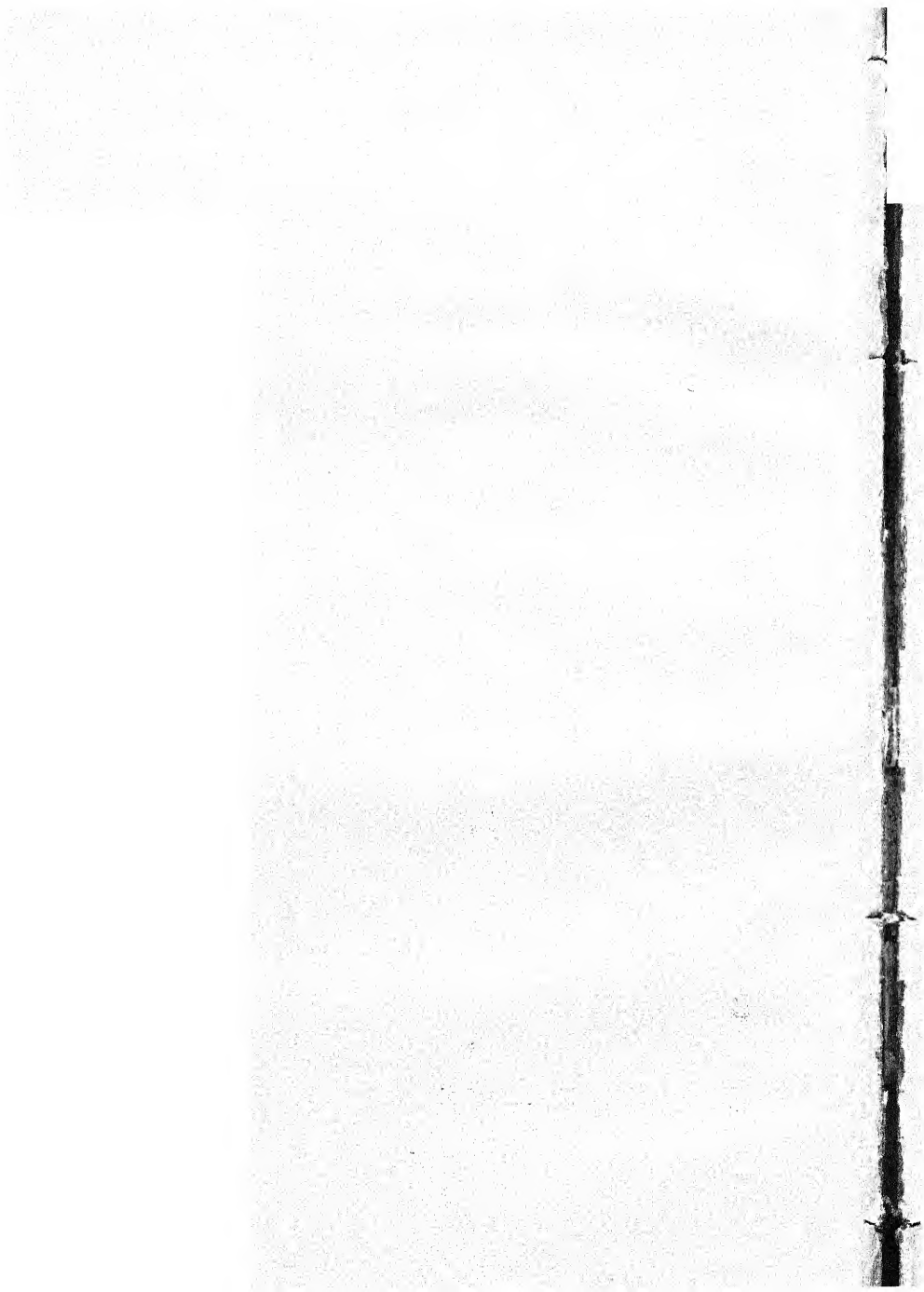
For typing the manuscript I am grateful to Shri A.K. Taneja. I am also grateful to Shri Gaur who translated some of the material for me and Shri Kaushik who produced the maps and diagrams. Shri N.R. Gopalakrishnan and his team in the Publication Section deserve special thanks for seeing the volume through in the press in record time after the final manuscript was made available to them. Finally I would like to express my gratitude to our Director, Shri R.N. Haldipur, for taking a personal interest in this publication and writing the Foreword.

1ST DECEMBER, 1976
NEW DELHI.

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1

Some Preliminary Observations

An economist addressing himself to the problem of district planning in India can be broadly concerned with two sets of issues. The first is a set of normative issues concerned with questions of whether district level planning is desirable in India and what specific form it should take. The other is a set of positive issues concerned with the reality of how district planning is actually done in this country. This book deals with both sets of issues.

It is important to recognise at the very outset that much of the literature on planning, whether it is concerned with planning for a region, a sector or the entire economy, has been largely concerned with the quantitative techniques of arriving at certain targets. Attention has been focused mainly on devising more refined and more elaborate methods of computing certain numbers. Certainly the search for more powerful methods of computing targets has its uses, particularly in systems where almost all economic activities are controlled by the state according to a certain plan. But in a system where activities are only partially controlled targets can mean no more than approximate benchmarks. In such systems the preoccupation with devising more refined methods of target computation becomes a waste of time beyond a point. What seems to be of central importance for such systems in terms of research on the methods of planning is to devise adequate processes of planning. Processes of identifying, collecting and analysing information on which the target computations have to be based. Processes through which the real operating systems can be manipulated to approach the targets. And finally processes through which the computation of targets can be made responsive to feedback from the actual performance of the system. Unfortunately these questions have not found

adequate attention in the planning literature. In this book an attempt has been made to restore a balance in the context of district level planning.

In this context one quickly discovers during the early stages of field investigation that much of the problem lies in the domain of an organisation theorist rather than the economist. This is not surprising because planning is as much an administrative problem—the problem of economy management—as it is a problem for the economist. Consequently any attempt to confront the normative question of the desired process of district planning without recognising the organisational or administrative problems would inevitably become sterile. I have not hesitated in raising these questions of organisation and administration. In this the book shares a common perspective with the official district planning guidelines (Planning Commission 1969). The answers, however, have very often proved to be elusive even for experienced specialists in organisation and administration. In that sense the book remains open ended.

As regards the positive question of what district planning is in India, one must again be careful to avoid confusing what it is intended to be in principle with what is actually happening on the field. And yet it is important to note that the intended model is very much a part of the reality of district planning because what is actually happening on the field is nothing more than a reflection of the intended model, transformed or distorted by the mediation or mere presence of a large number of other factors with which we are not directly concerned.

We are thus confronted with a set of four distinct but related questions:

- (a) Is district planning desirable in India?
- (b) If desirable, then what specific form should it take?
- (c) What is the intended model of district planning?
- (d) What is the actual experience on the field with regard to district planning?

The first two problems are the normative issues which we mentioned earlier. These issues have been dealt with in Chapter 2. In this Chapter we have tried to bring together the relevant body of theory and what seemed to be the important elements of reality to derive the basic ingredients of what might best be defined as the desirable district planning process in India. Next, in

Chapter 3, we have discussed the concept of district planning as formally recognised by Government. A comparison of this model with the desirable process of district planning outlined in Chapter 2 has enabled us to predict certain gaps which are likely to have emerged in putting the Government's model into operation. These predictions have been tested in Chapter 4 where we have examined the process of district planning as it is actually operating.

Some clarification is necessary at this point about what the study has not done. Planning is sometimes seen as consisting of a set of targets about various programmes and a set of policies laid out in a document. This is a totally inadequate conception of planning which sees one part of planning—the formulation of a plan—as the whole of planning. Implementation is an equally important part of planning. In fact, it is not even correct to describe plan formulation and plan implementation as separate parts of the planning process. There is considerable overlap between the two and the process of plan formulation must incorporate a system of response to feedback from the implementation process. But the problems of plan implementation are so complex and so deeply tied up with the political system and the system of administration that an adequate discussion of these issues would constitute a separate study by itself. The present study, therefore, has restricted itself mainly to the process of plan formulation and considered the implementation process only where this impinges directly on the former.

Another aspect of considerable importance which we have not discussed at any length in the subsequent chapters is the mode of production within which district planning has to be located as a specific form of state intervention. In recent years social scientists concerned with India have become particularly conscious of this problem. In the course of an extended debate which is still under way* it has come to light that development has been so uneven between different regions that any general description applicable to the entire economy is no longer possible. Nor will it be possible for some time to come to offer a detailed area specific characterisation of the mode of production operating in each part of the country. Under the circumstances, I shall have

* For a useful survey of the debate and references to the relevant literature see Harry Cleaver, "Internationalisation of Capital and the Mode of Production in Agriculture", *Econ. & Pol. Weekly*, XI, 13, Rev. of Ag., March, 1976.

to leave it to the ingenuity of the reader to relate the general problems raised here to the specific conditions obtaining in the region of his interest. Nevertheless the question of the mode of production cannot be ignored altogether because any planning, at whatever level, cannot be separated from the operating system in which the plan is supposed to work. The contents, the mechanics and the final outcome of the plan are all decisively governed by the nature of the operating system. Without a specification of at least the broad contours of this operating system, our analysis of the problem of district planning would, as it were, hang in the air.

In a very broad sense the agrarian economy of India may be described as transitional. It is in transition towards fullfledged capitalist relations, but strong pre-capitalist relations still survive. This broad tendency towards capitalist farming is captured in certain approximate indications. For instance, the share of agricultural labourers in total work force has gone up from about 19.7 per cent in the 1950-51 census to as much as 26.3 per cent in the 1970-71 census. In some states they account for up to 40 per cent of the work force. Over the same period the total number of tractors in use went up from about 8,000 to 1,00,000. The number of pumping sets went up from about 10,000 in 1951 to as many as 32,00,000 in 1971. Apart from the entire crop of non-food or commercial crops, almost 30 per cent to 40 per cent of the food crop now comes into the market as commodities. These are all symptoms of the growth of capitalist relations in the countryside, *i.e.*, in the domain of district planning. However, as we have noted above, average tendencies for the country as a whole can be misleading in view of the sharp differences between different regions. In some areas such as, for instance, the wheat belts of Punjab, Haryana as well as some of the rice, jute, cotton, tobacco and sugarcane growing areas capitalism is quite advanced. This has occurred along two different paths. On the one hand the former feudal landlords have now taken to agriculture as a profitable investment or business enterprise. On the other hand the richer sections of the peasantry who have acquired large holdings of land, livestock and machinery have also moved towards capitalist farming proper.

In other parts of the economy, notably in the states of Orissa, Bihar, Madhya Pradesh and parts of Rajasthan and U.P., the

penetration of capitalist relations has been marginal. However, the distinction between one or another form of capitalist agriculture and pre-capitalist agriculture is not easy to grasp in the Indian context. This is because even the capitalist farmer often finds it profitable to perpetuate certain pre-capitalist forms of surplus appropriation. Since the development of capitalism very often manifests itself in such distortions where a pre-capitalist method of exploitation is perpetuated or even intensified, especially when a former landlord takes to capitalist farming, what is in essence capitalist farming is very often confused as being a symptom of semi-feudalism. However what is important is not the nomenclature one employs but rather a grasp of essential relationships obtaining in a system. As I pointed out earlier, in view of the transitional character of agriculture and the sharp regional differences, this can only be done on an area specific basis.

As far as broad contours are concerned the essential point to be grasped is that the tendency, in greater or lesser degree, is towards the development of one or another form of capitalism. The entire thrust of state policy in the rural sector has been in support of this development. The land reform legislations of the different states, beginning from the early fifties, have been aimed principally at freeing agriculture from the fetters of a colonial-feudal system. The community development schemes, state investment in irrigation and land development, the introduction of the intensive agriculture strategy from the middle sixties, all of these are aimed at supporting and consolidating the development of modern capitalist agriculture. Supporting the development of modern capitalist agriculture is the unifying theme, the underlying philosophy, of our strategy of rural development. The prospects and achievement of district planning have to be examined from this perspective.

2

Elements of a Conceptual Framework

The concept of district planning is not novel in Indian planning though, as we shall see below, very little had been achieved in practice until recently.¹ It was only in 1969 that fairly detailed guidelines for the formulation of district plans were laid down by the Planning Commission (Planning Commission 1969) signifying the formal adoption of an approach which had been appearing in one form or another almost throughout the planning era.

However there is already a fairly large volume of literature dealing with the conceptual issues in district planning². This literature has been concerned mainly with two types of questions : (a) The rationale for district planning, and (b) an identification of the domain of district planning in terms of economic activities.

RATIONALE FOR DISTRICT PLANNING

As for the first question, the rationale for district planning has usually been set in a multi-level planning frame (Planning Commission 1973b) even though an adequate and operational theory of Multi Level Planning has not yet emerged either in India or abroad (Sau 1971). Such a theory must necessarily draw upon two distinct sets of theoretical constructs, *i.e.*, 'decentralised planning' and 'regional planning' and integrate them into a unified theory. But this has not yet happened. Almost

¹A notable exception was the formulation of a plan for Wardha district in Maharashtra (Vyas 1969, Inamdar 1973).

²To mention only a few important contributions see among others, Gadgil (1967), Raj (1971), Rao, V.K.R.V. (1973), Vyas (1969), Paranjpe (1969), Nath (1969), Rao & Bhat (1960), Mathur (1973), etc.

all the classic contributions on decentralised planning processes, e.g., Barone (1908), Taylor (1929), Lange (1963), Uzawa (1958), Kornai and Liptak (1963), Malinvaud (1967), Kantorovich (1964), etc., have remained abstract formulations cast within the framework of a totally controlled economy. Moreover, the type of decentralisation postulated in these formulations is 'sectoral' rather than 'spatial' decentralisation and the regional dimension has been by and large ignored. Meanwhile a new field of research on regional problems, i.e., Regional Science, has developed more or less independently of the research on decentralised planning processes. Bibliographical surveys (Isard, etc., 1960; Friedman and Alonso 1964) reveal that a vast literature has grown up in this field in a period of scarcely twenty years. However the large bulk of these are a collection of analytical techniques which are neither integrated with one another (Isard and Cumberland 1961a, Mayer 1968) nor have much to do directly with the problem of consistent planning at many levels.

Under the circumstances, the rationale offered for district planning is mainly an inventory of standard arguments for decentralised planning and regional planning. It is contended that in view of the wide regional variations in natural endowments, attained levels of development and potentials, a common strategy of development applied across the board will not be suitable for all regions (Mathur 1973). Each region must have its own strategy of development specifically suited to its requirements. Since such detailed planning at a single centralised level would involve the solution of an almost unmanageably large problem, it has been argued that the total planning problem should be partitioned according to some criteria into sub-system problems (Dutta Choudhury 1973). Some of these can then be pushed down to lower levels of decision-making. Given that the basic purpose of this partitioning is to have different strategies suited to individual regions which differ from one another, it is important that the spatial unit of this lower level planning should be *homogeneous* (Boudeville 1961). Evidently the larger the region, the lower will be the expected level of homogeneity and on this score, the smaller the *programme region* (Boudeville 1961) the better it is—other things being equal.

A second line of argument is based on the theory that information cost is a monotonically increasing function of the distance

between the action point at which the information is generated and the point at which the decision is made (Marshack and Marshack 1959). It has been argued that from the planning viewpoint if a subsystem, e.g., agriculture and allied activities, requires a very large volume of data which is widely dispersed over the economy then the information cost can be so large, if used for centralised decision-making, as to yield a negative net benefit of the use of the information (Chakravarty 1972a; Mathur 1973). Once again, therefore, for that subsystem where decision-making is pushed down to lower levels, the smaller the regional unit the better it is, other things being equal.

A third line of argument states that with decision-making at lower levels it is easier to organise an effective response system for public participation in plan formulation which, apart from other considerations, will make it easier to mobilise local physical and financial resources (including free labour or 'shramdan') for local schemes. On this count again, other things being equal, the smaller the unit of regional planning, the better it is (Paranjpe 1969, Nath 1969, Raj 1971).

✓ However, other things are not equal. Informationwise, the district is the ultimate reducible unit for which data collecting machineries have been developed (Dutta Choudhury 1971). Furthermore, while public participation is welcome, decisive influence of local interest groups have to be kept within limits. From this point of view a block level regional planning unit is not very promising (Paranjpe 1969). Finally pushing down the level of planning implies that a certain minimum of planning infrastructure—especially properly trained staff—will have to be provided at the lowest planning level for reasonably competent decision-making. Even at the district level, it is agreed, there are major gaps in this area (Vyas 1969, Nath 1969). Evidently it is unreasonable to expect that such decision-making capability can be made available even lower down—at least over the next few years.

It is easy to see from the foregoing that with regard to those activities which cannot be easily planned centrally a large number of arguments can be marshalled in favour of pushing the level of planning downwards in the hierarchy of spatial units of administration. But there are equally forceful arguments against pushing them too far down. The district appears to be that critical level

in the hierarchy where the arguments in both directions are accommodated optimally.

Apart from these standard academic arguments in favour of selecting the district as the basic unit of regional planning, a compelling practical consideration favouring the choice of district as the unit of planning is the strategic role of the collectorate in India's field administration. Anyone familiar with our system of field administration is aware that the office of the district collector serves as the control room for almost all governmental activity in the district. It is here that the spatial boundaries of law and order administration and revenue administration map on to the spatial boundaries of development administration to constitute a single unified domain of control for the district collector. And it would be useful at this point to dispense once and for all with the myth perpetuated by some social scientists that these are three separable aspects of field administration. In reality it is not possible to move an inch with regard to any one of these aspects without taking corresponding steps with regard to the other aspects. Nobody below the level of the collector has the authority to take these coordinated steps. Anybody above the collector is too far removed from the scene to be able to make a judgement about the desired course of action. Hence it is to the office of the collector that information and problems flow in and it is from the office of the collector that decisions flow out about the day-to-day management of the hinterland of a district.

Related to this is the issue of managing people. The success or failure of a plan depends critically on how far people can be moved to act in accordance with the plan. In a system such as ours this point is particularly important in the context of rural development where the basic initiative for decision-making rests with the private owners of land. Given the pattern of land ownership in India where a small group of landlords or rich peasants control large portions of cultivated land, nobody below the district collector has the necessary authority to deal with these powerful decision-makers from a position of strength. Indeed the question which arises here is whether even the collector has adequate authority to deal with these powerful decision-makers.

Furthermore coinciding with these spatial units of field administration, the district also often constitutes a more or less integrated functional unit of the rural economy with the district

headquarters serving as the nodal point of the economy. This structure naturally breaks down where a district is located close to a major industrial or commercial centre. In the latter case the surrounding districts are always converted into a hinterland which gravitates with the urban centre as its focal point. But in the absence of such urban pulls there is usually a close correspondence between the spatial unit of administration and the unit of a rural economy. This is probably attributable to the high degree of state intervention in the functioning of the rural economy, which can be traced back several hundred years in our history, which naturally leads to the conversion of administrative centres into centres of economic activity as well.

Finally, the case for choosing the district as a unit of planning would remain incomplete without responding to the frequent argument that administrative boundaries of a district do not correspond to natural geographic regions. While there is some truth in this argument, it is difficult to see why a particular state should not be able to rationalise the boundaries of some of its districts to ensure that the same district does not have to plan for too many natural geographic regions or that too many districts do not fall within the same natural geographic region. Sometimes, as in the case of Bastar in Madhya Pradesh, the largeness of the district is also cited as a problem. As far as these and other arguments of the perfectionist are concerned it has to be recognised that what we are in search of here is not a *programme region*, in the Boudeville (1961) sense, which will be perfect in all respects and in all cases. Perhaps a perfect spatial unit of planning does not exist except as a theoretical concept. All we can hope for is a reasonable unit which does not subsequently become a major hinderance to the planning process. From this point of view there does not appear to be any better alternative to the district as a unit of rural planning in India.

DOMAIN OF DISTRICT PLANNING

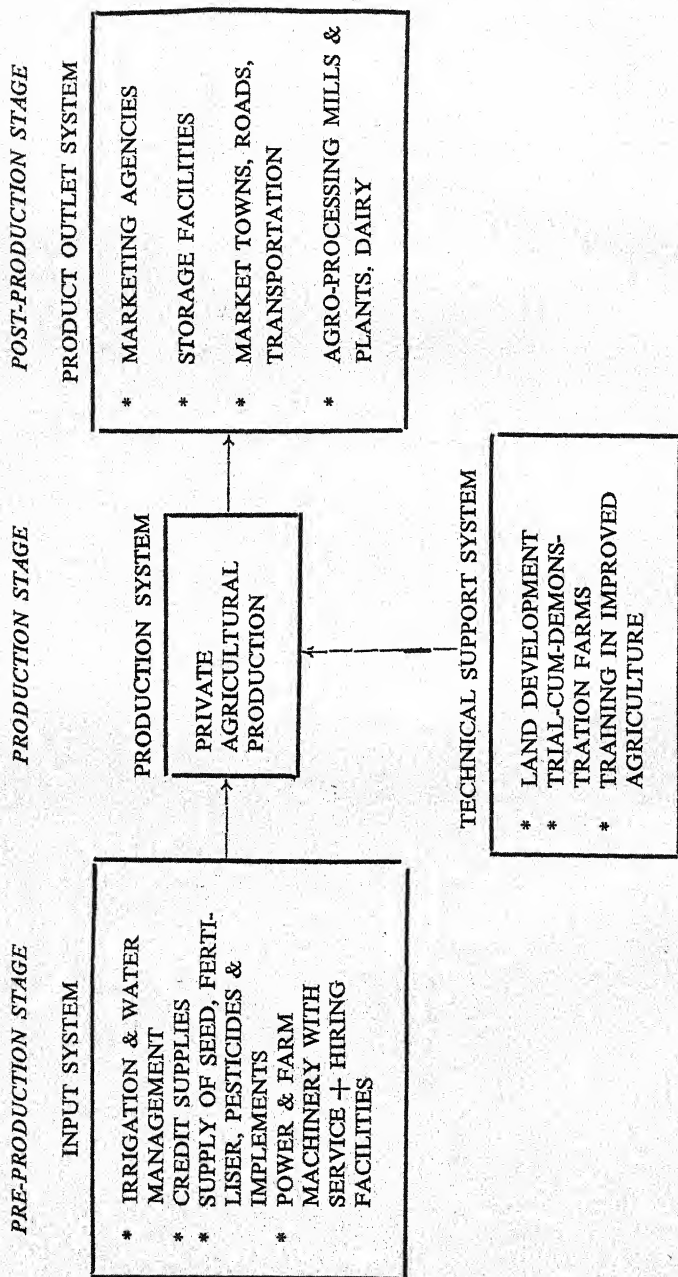
The second question which has gained prominence in the discussion on conceptual issues in district planning is the desirable domain of district planning in a multi-level planning scheme. If the domain is to be derived on the basis of the rationale for district planning, as outlined above, it then follows that the

subsystem of 'agriculture and allied activities' needs to be planned at the district level (Dutta Choudhury 1973). However, a competing view has it that if district planning is seriously aimed at realising the development potential of a region then its domain must include groups of industries which are potentially the 'economic bases' or 'export sectors' of the region (Mathur 1973). The 'economic base' or 'export sector' of a regional economy is the group of productive activities in which a region has a 'comparative advantage' compared to other regions such that these activities are concentrated in the region. They largely cater to markets in other regions or countries and also constitute important cores of development potential (North 1955).

Recent empirical experiments (Alagh 1972) reveal that the 'spatial clustering' of industries is still weak in India compared to 'technological clusters'. However, there is a fair amount of correspondence between the two which point to the emergence of nascent industrial complexes which may well become strong economic bases. Of course, the type of regions we have in mind here are much larger than districts. The experiments mentioned above were carried out with states as their spatial units. Hence, in the multi-level planning framework, if regional planning is to include major manufacturing industries in its domain then we are really thinking of regional planning at the state level. Even here there will be knotty problems of inter industrial balancing, in an inter regional setting, which will also have to square with the national export-import targets. Evidently methods of solving such complex problems will have to be sought in the direction of introducing explicit spatial units in the sectorally decentralised planning processes developed by Kornai and Liptak (1963) and others. Some possibilities in this direction have been suggested by Tinbergen (1968). Our present concern, however, is limited to planning at the district level.

From an operational point of view, it is not adequate to point out that 'agriculture and allied activities' will be the core of district planning. Several other characteristics need to be noted in charting out the major ingredients of district level planning. Though agriculture and allied activities will be the core of district planning, it has to be kept in mind that these are basically private production activities carried out by private property owners in our country. Planning for this sector will, therefore, be planning not

Display 1



of the production activities themselves but rather of supportive programmes aimed at removing the obstacles to agricultural development (Rosenstein Rodan 1961).

Viewed in this way, public programmes can be interpreted as obstacle removing interventions in three related systems at three different stages. The schematic display which describes this structure in Display 1 identifies the major agricultural support areas for which programmes will have to be formulated in the district plan. Two programmes are to be especially noted.

First, irrigation and water management for conjunctive use of surface and sub-surface water (Irrigation Commission 1972) must be an important element of integrated district development programmes even though large and medium irrigation schemes may extend beyond individual districts or even states. The district water management schemes will have to build around the schemes planned at a higher level to deliver appropriate irrigation services suited to the need of the local agricultural production system. Secondly, if a large number of such support programmes are to be administered, selling, harvesting and service facilities are to be provided for various inputs including farm machinery; marketing, storage and credit supply arrangements have to be made and finally some small industries are to be developed side by side with local transport facilities; then we have here all the ingredients of a programme for developing a hierarchy of growth centres which are simultaneously 'central places' (Losch 1954) and 'growth poles' (Perroux 1950) which serve the rural hinterland as centres of administration as well as economic activity.

Furthermore it has to be noted that according to the logic of the Fifth Five Year Plan (Planning Commission 1973a) the major redistributive role has been placed on the subsystem of 'agriculture and allied activities' (Dutta Choudhury 1973). This role again implies a three-tier programme for three types of target groups. First, the effective implementation of land reform—combined with land redistribution and mobilisation of resources for public programmes from the large property holding groups—must be taken up as a priority programme under district planning. This would not only redistribute welfare through utilisation of mobilised resources for public programmes but also lead to the breaking down of precapitalist tenurial relations in agriculture—leading to the growth of an independent and viable middle

peasantry. Second, for those poor peasants whose plots remain too small to yield viable farm business income, sources of cooperative non-farm income such as animal-husbandry poultry, handicrafts and cottage industry must be exploited through supportive public programmes (Chauhan, Mundle, Mohanan and Jadav 1973). Particularly important in this context is the availability of exclusive credit facilities to protect the rural poor against private money-lenders and the systems of bondage which they impose on the indebted labourer (Mundle 1974). Thirdly, for the category of under-employed or unemployed agricultural labourers who have almost no assets at all special rural employment schemes have to be organised³ as alternative sources of off-farm employment.

To recapitulate, the main activities which need to be in the domain of district planning include:

- (i) Agricultural development, *i.e.*, planning activities in the input system, the technical support system and the product outlet system as described in Display 1.
- (ii) Minor (including tubewell irrigation) and water management schemes.
- (iii) Growth centre and municipality development plus local transport planning.
- (iv) Agro-processing mills and plants, dairy and cottage industries.
- (v) Land reforms and land redistribution; local resource mobilisation.
- (vi) Animal husbandry, handicraft, marketing and credit cooperatives exclusively for poor peasants and landless labourers.
- (vii) Rural works programmes and special employment schemes.

Finally, it is important to remember that the district is the

³Such schemes cannot be centrally administered, as is presently attempted, for the same reasons outlined earlier in favour of pushing down the decision level. Moreover, in view of our continued dependence on climatic factors for agricultural performance and the frequent failure of crops, these normal schemes must be thoroughly integrated with special disaster relief programmes in the district plan through the device of contingency planning (Mundle 1974). Of course the success of this entire package of redistributive programmes depends on the growth of a powerful and organised response system of the rural poor. For a discussion of this aspect see Bardhan (1974a).

lowest level of planning decisions in a multi-level planning system and as such it will have to dovetail its plan with plans generated at higher levels. In particular planning decisions regarding activities in the domain of district planning will be subjected to constraints imposed by planning decisions about related activities which belong to domains of higher level planning. Decision levels and the activities included in their domains in a multi-level planning system for India have been demonstrated in Display 2.⁴

TASKS IN DISTRICT PLANNING

Our attempt so far has been that of arriving at a rational basis for charting out the domain of district level planning in a multi-level framework. Keeping in mind the more important ingredients of planning at this level it is possible to identify the major tasks involved in the process of district plan formulation.

In trying to identify the major tasks involved in district planning for the domain charted in Display 2, it has to be emphasised that the thrust in planning exercises will have to be towards simplicity as opposed to sophistication. This is not only because the utility of some of these sophisticated exercises are still in doubt (Isard and Cumberland 1961a) but more so because the kind of planning infrastructure, expertise and mechanical data processing facilities available at present is minimal—as we shall see below.

Data Generation and Structural Analysis

(1) The first and most obvious task, as in any planning exercise, will have to be that of generating the data base of the plan. But it is important to emphasise that this information, which might be gathered through the different departments responsible for the various sectors, must be available in a highly disaggregated form—at least giving blockwise break downs for all items of data. District level totals and averages for each sector are hardly adequate for purposes of spatial planning.

(2) This spatially disaggregated information must then be used for a 'structural analysis' of the district (Rossi Doria 1961). A major component of this analysis will, of course, be an analysis

⁴For alternative distributions of decision domains between different levels of planning see Mathur (1973).

Display 2

DECISION MAKING LEVELS FOR MULTI-LEVEL PLANNING

CENTRAL LEVEL
DECISION MAKING
WITH SECTORAL
'DECENTRALISATION'
PROCESSES

Financial Resources and Macro-Economic Policy Planning
Economy Wide Mining and Industrial Production Planning
Inter-State Industrial Location Planning.
Export-Import Planning
Power and Energy Planning.
Irrigation Planning & Water Management
Economy wide Transport and Communication Systems Planning.

STATE LEVEL
DECISION MAKING
SUBJECT TO CENTRALLY
DETERMINED CONSTRAINTS

State level Resource Mobilisation & Deployment
Intra State Industrial Development: Input, Production and Outlet Systems
Urban Development and Transport Planning
Physical Supplies Planning
Health, Education and Welfare Planning.

DISTRICT LEVEL
DECISION MAKING
SUBJECT TO STATE
LEVEL CONSTRAINTS

Land Reform and Land Redistribution
Local Resources Mobilisation
Agricultural Development: Input, Technical Support and Outlet Systems
Minor (including tubewell) Irrigation and Conjunctive Water Use
Reserved cooperatives for poor peasants and landless labourers
Agro-Processing Mills and Plants, Dairy, Cottage Industry.
Growth Centre and Municipality Development and District Transport System.
Rural Works Programmes and Special Employment Schemes.

of the agricultural structure, but all other aspects important in the district planning domain must also be covered. Essentially what is involved here is a simple yet reliable substitute for the more sophisticated statistical technique of cluster analysis. All the blocks have to be graded and mapped into groups according to alternative sets of criteria. To mention a few:

- (i) Soil, climate, topology, hydrography.
- (ii) Type of farming, level of production and productivity.

- (iii) Population density, land tenure system and per capita incomes.
- (iv) Types and levels of industrial production, transport facilities and accessibility/interaction with growth poles and central places.

The advantage of this cartographic representation together with tabular data is that a comparison of maps will yield a quick and reliable, if somewhat approximate, idea of the groups of contiguous blocks which are homogeneous in most respects (Boudeville 1961). Groups which are substantially different from one another will have to be identified as separate sub-regions within the district which may require different strategies of development, *i.e.*, Boudeville's 'programme regions'. Of course neither block nor district boundaries will usually correspond to the boundaries of natural geographic region. However at the present level of disaggregation—given the approximate procedure—this non-correspondence is likely to be fairly marginal.

(3) Apart from identifying sub-regions, their profile and special problems and their potential, the information can also be combined into a more aggregative form to yield an overall profile of the district, its problems and possibilities for the future. The aggregative and disaggregative information can thus be used to identify the major qualitative goals and the suitable strategies for achieving these goals. All this put together would constitute the 'approach document' for the district plan.

District Ranking and State Resource Allocation

(1) The next stage of the planning process is a crucial task which will have to be performed at the state level. The approach documents prepared by the various district planning boards will have to be evaluated at the centre and each district ranked according to explicit criteria for state level assistance. This ranking will naturally be a multiple variable exercise. The attained level of development can be quantified by mean-variance analysis of various indicators like total income, per capita consumption, productivity etc. (Stone 1961). Unemployment, likewise, will have to be quantified in multiple dimensions (Planning Commission 1970; Raj Krishna 1973; Sen 1973) while inequality indices will have to be measured for individual district (Bardhan 1974b) using Gini coefficient or some improved measures (Sen 1973).

(2) *It is essential that this exercise is conducted for deciding the allocation of resources, including scarce inputs like power and fertiliser, to a district before the district formulates its plan.* If detailed information cannot be specified at the early stage, at least the likely ranges and lower bounds of assistance and various availabilities must be specified in advance (Dutta Choudhury 1973) so that the district can build a core plan and extend it in case the actual availabilities turn out to be less stringent as the plan proceeds.

This prior information from the state level on assistance and availabilities is absolutely essential if there is to be any meaningful district level planning. Given the much greater 'openness' of a regional economy compared to most national economies (Tinbergen 1968, Cao-Pinna 1961, Boudeville 1961) its performance is highly dependent on exogenous factors. Hence, no meaningful plan can be developed without some parametric specification of these factors.

District Social Accounts Construction

(1) Once these exogenously determined factors have been pegged, the district planning board can proceed with translating its broad qualitative goals into specific quantitative targets and operationalise its strategy in the form of programmes which can achieve these targets. For this stage of the planning process several analytical techniques are available in the Regional Science literature. Sequences of analysis have also been worked out which try to integrate these into a framework (Isard and others 1960). However it is not certain whether all these techniques are operationally effective. Moreover, these are fairly sophisticated exercises for which neither expertise nor data processing facilities can be expected at the district level in the near future. We need to work with simpler, heuristic substitutes.

One important analytical exercise, perhaps the most important at this stage, is the computation of an 'extended regional accounts' system which we have suggested in Display 3.⁵ Essentially this is a simplified substitute of input-output models integrated with a regional social accounting system. This model would involve some laborious but uncomplicated computations provided we are

⁵For a more rigorous treatment see Stone (1961).

Display 3

[illegible]

satisfied with approximations. Approximations based on sample surveys in the district would be adequate to serve the purpose. The purpose of the exercise is to have a model giving a quantitative anatomy of the district economy together with fairly detailed information on its relationship with external sectors. It is not intended to use the model for any elaborate problem solving exercises like deriving the $(I-A)^{-1}$ matrix in input-output analysis. Even without these, the model would indicate which sectors and programmes are strategically important for which targets, their own inter-relations and the broad order of magnitudes.

Sectoral Programme Formulation

(1) Once this is done, plan formulation will have reached the stage where the district planning board can specify 'well defined' problems for departments in charge of different sectors and they can proceed to the programme formulation stage.

(2) Each department, working within the framework of the extended district social accounts framework, will now have to develop detailed programmes for attaining the targets spelt out by the district planning board. It will have to work in close coordination with other departments responsible for inter-related sectors. It is more than possible that the original set of targets turn out to be unfeasible, in which case they will have to be changed and the exercise reworked. Programmes for one sector may also involve changes in programmes for another sector. This stage of the plan formulation process is probably the most complicated and involves intricate problems of organisational design. It is obvious, however, that this delicate task of coordination between departments and the dovetailing of programmes for interrelated sectors will have to be performed by the district planning board. The question of crucial importance is to design a suitable system of controls.

(3) Within the individual sectors, some important exercises in programme formulation can easily be identified. Farm management studies, conducted across the district by the agriculture department, will be of crucial importance for determining suitable farm production patterns and techniques in the different subregions. These can provide the basis for helping individual farmers to develop their farm plans and provide them research, training and other extension services. At the same time these

would also enable the departments to forecast demand levels for guiding public programmes at the pre-production and post-production stages described in Display 1 (Malassis 1961). Rudimentary cost benefit analysis giving approximate measures of various benefits and costs would help each department to choose between alternative schemes for its sectoral programme. Simplified comparative cost analysis of the viability of locating agro-processing mills and plants in different areas would help the industry department to plan the development of small industrial estates at the growth poles (Rosenstein Rodan 1961). Sample surveys of interaction between different points would yield some crude indices of gravity for designing the local transportation system and programmes for quasi-urban services and growth centre renewal.

Programmes Network for Complete District Plan

(1) Finally, all the programmes will have to be cast in a time-frame, a simplified analogue of the PERT Chart, which will enable the district planning board to even out bunching of projects under different programmes and also test for consistency of requirements and deliveries across programmes at certain discrete points within the time horizon of the plan.

(2) This particular device will also be an essential instrument for reviewing the progress of programmes during implementation and making 'on-line' adjustments in the plan as and when such adjustments become necessary, e.g., rescheduling programmes of rural employment to absorb larger members in the event of a drought (Mundle 1974). An interesting application of this device in developing an integrated area plan has been demonstrated by Max. F. Millikan (1967).

To recapitulate the construction of a well formulated and operational district plan should ideally go through a process of broadly five distinct stages. These have been reproduced in Display 4 together with the agency responsible for performing the task at each stage. The process we have outlined is not very intricate. It involves a fairly simple sequence of five stages. It is easy to see that the formulation of any district plan which hopes to be a realistic guide to action must go through this sequence.

However as we shall see later the realisation of even this simple sequence of district planning would involve a very

significant structural reorganisation of administration. Moreover the reorganisation would be required not in the structure of district administration but in the departmental structure of the state secretariat.

It is also evident from the foregoing that a serious bid at planning from below for rural development would require a fairly large and well trained team to be attached to each district planning board. This team would not only have to be equipped with some basic techniques of statistics and operational research but it would also have to guide each department in formulating its sectoral programme.

3

District Planning Guidelines—An Evaluation

The concept of localised planning for regional development has appeared in one form or another in all the Five Year Plan documents. Nevertheless a determined move towards introducing comprehensive district level planning did not begin until as recently as the Fourth Five Year Plan. In September 1969 the Planning Commission, under the leadership of the late Prof. Gadgil, developed a set of detailed guidelines for the formulation of district plans (Planning Commission 1969) which it issued to the various states (Chakravarty 1972a).

It is important to scrutinise this document carefully not only because it contains the formal structure of the process of district planning that has been officially adopted, *i.e.*, the intended model, but also because a comparison of this model with the desired process outlined in Chapter 2 yields several interesting clues towards understanding 'district planning' as it exists today.

THE DOMAIN IN THE GUIDELINES

The document has been laid out in four chapters with related annexures¹ of which the first is essentially a statement of the rationale for district planning. Since the Guidelines were prepared during the Fourth Plan while the multi-level framework was formally conceived in connection with the Fifth Plan, this systems theoretic scheme (Chakravarty 1972a) is not explicitly defined in the document. However, the basic idea of planning at many levels is already evident: "Sometimes, even under one programme

¹See Guidelines for the formulation of District Plans, Planning Commission, Government of India, September 1969. All page references in this section relate to this document which is henceforth referred to as the Guidelines.

detailed planning has to be undertaken at different levels in respect of production, the transmission and the distribution of various inputs or resources. The essential levels at which plans need to be formulated for the different functions under a particular programme have to be identified in each case on the basis of the nature, scope, volume and organisational divisibility of specific activities. It is not, therefore, conducive to efficiency to provide any one unit or level for the formulation of local plans uniformly for all programmes (Planning Commission, 1969, pp. 4-5).

Though this conception is not quite the same as that outlined in our Chapter 2, the basic perspective is evidently similar. The first chapter of the Guidelines also points out some of the arguments in favour of district level planning which we discussed earlier, including the now familiar concept of integrated area planning (Ford Foundation 1973a, 1973b); acknowledges that in the beginning district planning is likely to be somewhat undecided and heuristic, moving towards more rigorous planning as experience is gained and the data base improves; and finally concludes with a list of the activities which can be included in the domain of district planning. The list includes "Programmes of agriculture, horticulture, animal husbandry, dairying, fisheries, forestry and grassland development, village small industries, communications, minor irrigation, soil and water conservation, cooperation. Also included are adequacy and locational suitability of facilities for storage, agricultural processing, marketing, credit, power and irrigation, education, vocational training, medical and public health and veterinary assistance, water supply and labour welfare" (Planning Commission, 1969, p. 11).

This is the domain of district planning in the intended model. Unfortunately the logic underlying this particular selection of activities in the domain of district level planning has not been spelt out clearly. It will be noticed that compared to the required domain which was outlined in the preceding chapter, the intended model excludes the crucial activity of land reform and redistribution. On the other hand apart from minor irrigation, power and irrigation facilities have been included separately in the domain. Clearly such multipurpose hydro-electric projects which usually involve command areas and catchment areas in several districts or even states cannot be planned at the district level.

This odd mix of activities in the domain of the intended model

suggests that the domain was demarcated without adequate thought to the specific reasons for which certain activities had to be included or excluded from the district level plan. Here a few comments are in order regarding the excluded redistributive activities. First of all it must be noted that redistributive goals have a high priority in recent government policy as enunciated in the Fifth Plan documents (Planning Commission 1973a, 1973c) and in the new economic programme which has been in operation since 1975. As further pointed out in the report of Planning Commission's Multi-level Planning Working Group (Planning Commission 1973b) these redistributive goals must be incorporated in the plan for 'agriculture and allied activities' which is precisely the domain of district level planning. These were the arguments which led us to include redistributive programmes in the desirable domain of district level planning in Chapter 2. So the question arises as to why these activities are missing in the Guidelines issued by the Planning Commission itself?

The immediate explanation is a simple matter of dates. The Guidelines came during the Fourth Plan, long before the Fifth Plan documents, the Working Group report on Multi-level Planning and the New Economic Programme were worked out. Furthermore, it suffers from a traditional bias which we mentioned earlier, *i.e.*, the separation of revenue and law and order administration from development administration. Under this peculiar conception matters pertaining to land ownership are seen as legal and revenue matters which have little to do with the development plan of a district. In reality, of course, it has everything to do with development in the district. As we have argued above, in the mode of production prevailing in Indian agriculture, a small number of landlords and rich peasants serve as the critical decision makers in agriculture. It is their decisions which govern the progress of Indian agriculture in the ultimate analysis. And the source of their power is precisely their disproportionately large ownership of land. Thus both in terms of redistributive goals as well as development goals, land reform and redistribution must occupy a central place in the district plan. Yet with the so-called separation of revenue and law and order administrations from development administration, they find no place at all in the Planning Commission Guidelines.

As regards special rural employment schemes, the Guideline,

in its suggestive form of a district plan,² sets aside a whole chapter under the section on 'Assessment of the Existing Situation' on problems of employment. In the section on 'Planning for Development' a chapter is also set aside on welfare schemes for backward communities who largely belong to the category of landless labour or poor peasants. Employment in public works is also taken up in the Guide Points (Annexure C) and in the discussion of likely programmes in chapter 4 (pp. 81-82). Thus considerable attention has been given to the problem of employment. But unfortunately Government sponsored rural employment schemes have been seen mainly as a relief or welfare measure. The central importance of such schemes in the basic strategies of development seems to have been underplayed. Such public works programmes are critically important both in terms of redistributive goals and development goals. The existence of such special employment schemes as an alternative source of wage income would substantially increase the bargaining position of agricultural labour *vis-a-vis* the landowners. Prevailing wages which are way below the legal minimum wages prescribed by an Act of Parliament would then be pushed up through the labour market itself. At the same time surplus agricultural labour would be used productively in labour intensive capital formation, *e.g.*, dams, roads, minor irrigation, land reclamation, etc. The Guidelines has seen rural employment schemes not as playing this central role in rural development but rather as a relief or welfare measure.

THE PROCESS IN THE GUIDELINES

The remaining three chapters and associated annexures in the Guidelines are concerned with the process of district plan formulation. Chapter 2 summarises the entire process, while chapters 3 and 4 are concerned with the first and last stages of what turns out to be a three stage process with multiple tasks in each stage. The intermediate stage has been discussed in detail in chapter 2 itself. For the sake of brevity, and in order to retain the continuity of the entire plan formulation process, we have discussed all three chapters simultaneously in tracing out the sequence of tasks.

²See Appendix B in this book or Annexure A in the Guidelines.

Preliminary Stage

The preliminary stage, which might be described as the stage of generating the data base of the plan and assessing the existing level of development, consists of four main tasks.

The first task suggested in the Guidelines is the collection of information (pp. 15-16). For this purpose a complete set of programmes giving the items, units and format of different sets of tables has been included in Annexure B (pp. B1-B48) of the Guidelines. These tables not only include summary data for the entire district but also detailed break downs for almost all items blockwise and sub-regionwise. A list of major subject heads for which information tables are suggested has been given in our Appendix A. Once such information is collected, the Guidelines suggests, the second task is to translate this into at least four maps (p. 31):

- (a) Basic physical and topographical characteristics.
- (b) Cropping pattern and industrial activities.
- (c) Systems of communication, irrigation and power.
- (d) Location of growth pole or central place type of activities, e.g., administrative centres; market towns; storage facilities; health, education and welfare facilities.

These maps can be compared to identify sub-regions which are different from one another in any of the preceding dimensions and may therefore, require alternative strategies of development. Further guidance for demarcating sub-regions is given in Annexure D (pp. Di-ii). As a third task, it is suggested (p. 16; 32), district level officers must write up their assessment of the existing situation with respect to activities under their control, using the collected information and their own experiences. Specific guidepoints have been given for each type of activity in Annexure C (p. C-1 to C-58) to help the officers write their assessments. It is also emphasised that specific conditions, problems and potentials must be pointed out for each sub-region together with suggested strategies for action in the future (p. 16, 32). The major activity groups³ for which such assessments are suggested are:

- | | |
|----------------------------------|---|
| (a) Infrastructural Development: | Communication system, Marketing facilities, Storage and processing facilities, Irrigation |
|----------------------------------|---|

³See Guidelines, pp. 33 to 97.

- and power network, Banking and credit facilities.
- (b) Structure of Social Services: Education, Health facilities, Water supply and Veterinary facilities.
- (c) Geo-physical conditions and Natural Resources.
- (d) Nature and Scope of Economic Activities.
- (e) Labour Resources and Employment.
- (f) Special Institutions, e.g., Cooperatives, Panchayats, etc.
- (g) Condition of Backward Communities.
- (h) Assessment of existing schemes and Assessment of Resources.

Once all the tables, maps and assessments are ready the fourth task will be that of consolidating all these into a statement listing the resources, problems, prospects and priority of activities in different sub-regions (p. 16). *It has been emphasised, further, that this task of consolidation and preparation of a 'preliminary framework' of the plan will have to be undertaken by an authority which is not only above departmental loyalties but also has enough authority to bring together and determine the programmes of the government departments and local government authorities, co-operatives and financial institutions* (p. 17).

Intermediate Stage

With the completion of the 'preliminary framework' the plan formulation process of the Guidelines moves into the intermediate stage. This stage may be described as a stage of discussion with various agencies and groups on the 'preliminary framework'. The first set of discussions is to be held with the Block Development Officers (B.D.Os.) and departmental officers in order to rank the different blocks according to various indicators specified in the Guidelines (pp. 18-19), and evaluate the 'preliminary framework'. The second set of discussion is also to be held with departmental officers and B.D.Os. to draw upon their intimate knowledge of field conditions with regard to : (a) the performance of various institutions like cooperatives, panchayats, etc.; (b) the problems of programme implementation experienced in earlier plans; (c) the likely demand levels for the various services, supplies etc. during the plan period; and (d) the likely availability of local resources—private and institutional. The third set of discussions

Display 5

PROCESS OF PLAN FORMULATION

STAGE	TASKS	AGENCIES
PRELIMINARY	1. DATA COLLECTION	SECTORAL DEPARTMENTS
	2. CARTOGRAPHIC REPRESENTATION & SUB REGION IDENTIFICATION	PLANNING AGENCY
	3. SECTOR WISE ASSESSMENT	DISTRICT DEPARTMENTAL OFFICERS
	4. FORMULATION OF 'PRELIMINARY FRAMEWORK'	PLANNING AGENCY
INTERMEDIATE	5. DISCUSSION OF FRAMEWORK & RANKING OF BLOCKS	B.D.O.s., DEPARTMENTAL & PLANNING AGENCY OFFICERS
	6. DISCUSSION OF ROLE OF INSTITUTIONS (e.g., COOPS.), PROBLEMS OF PROGRAMME IMPLEMENTATION IN PREVIOUS PLAN, DEMAND PROJECTIONS & ESTIMATION OF LOCAL RESOURCES.	B.D.O.s., DEPARTMENTAL & PLANNING AGENCY OFFICERS
	7. DISCUSSION OF FRAMEWORK, WITH 'PROGRESSIVE FARMERS AND ENTREPRENEURS	PLANNING AGENCY & REPRESENTATIVES OF PRIVATE INTEREST GROUPS

8. DISCUSSION OF FRAMEWORK WITH NON-DEPARTMENTAL AGENCIES
PLANNING AGENCY, COOPERATIVES BANKS, PANCHAYATS, ETC.
9. MODIFICATION OF FRAMEWORK BASED ON 5 TO 8
PLANNING AGENCY
10. DISCUSSION WITH DEPARTMENTAL OFFICERS TO ASSESS FINAL FRAMEWORK
PLANNING AGENCY AND DEPARTMENTAL OFFICERS
11. MEETING TO LAY DOWN SPECIFIC OBJECTIVES & GUIDELINES FOR EACH PROGRAMME
PLANNING AGENCY & AGENCIES RESPONSIBLE FOR FORMULATING OR IMPLEMENTING PROGRAMME
12. FORMULATION OF PROGRAMMES: TIME FRAMED SPECIFICATION OF TARGETS, ACTIVITIES, INPUTS, PHYSICAL RESULTS, INSTL. & PRIVATE RESOURCES, SYSTEM OF PROGRAMME EVALUATION & REVIEW
SECTORAL DEPARTMENTS OR AGENCIES, *e.g.*, BANKS, COOPERATIVES.
13. INTEGRATION OF SECTORAL PROGRAMMES INTO TOTAL PLAN
PLANNING AGENCY, LEAD BY COLLECTOR/CHAIRMAN OF Z.P.
14. PRUNING TO DERIVE THE FINAL DISTRICT PLAN
STATE PLANNING AGENCY AND DISTRICT LEVEL PLANNERS.

FINAL

are supposed to be held with representatives of private entrepreneurs, farmers, etc., and also non-departmental agencies like the cooperatives, banks, panchayat bodies, etc. This is intended not only to get their reactions but also specifically to get their estimates about likely levels of various operations, e.g., lending by institutional finance agencies. At the end of these several rounds of discussions, the major gaps in the preliminary framework are likely to have been identified or errors rectified. The final task of this second stage of the district plan formulation process is to draw up the final 'broad framework' for the district plan.

Final Stage

With the final form of the broad framework prepared, the process moves into its third and final stage. The first task of this stage, according to the Guidelines (Planning Commission 1969), is to discuss implications of the framework for each sector with its departmental officers. The detailed list of items to be covered in this discussion are also spelt out (p. 24). Once the discussions are complete, the specific guidelines and targets for each programme will have to be spelt out. A listing of the major objectives and a broad outline of the considerations involved in drawing up strategies for each sub-region have been included in the Guidelines (Planning Commission 1969, p. 60). After this the individual departments responsible for different programmes, can draw up their detailed programmes giving a time framed specification of targets, activities, inputs, physical results, utilisation of private and institutional finance and a system of periodic programme evaluation and review for carrying out mid-course changes in case the programme fails to keep its schedule or some contingencies or unforeseen problems turn up. Some brief notes on the formulation of each of the more important programmes have been included (pp. 58-59) together with scattered references to the need for an integrated approach. These programmes really constitute the body of the district plan. When each programme has been drawn up, all these have to be brought together and integrated. This may involve some modifications in order to ensure consistency across programmes at each point of time where programmes are inter-related.

Finally this integrated set of programmes will have to be discussed with the state level planners and some further

modification or pruning may have to be done at this stage on the basis of state level constraints, *e.g.*, inadequate assistance. *But it is emphasised that such pruning should not be done independently of the district level planner lest the pruning becomes inconsistent with local priorities.* A suggestive format for the final plan, detailing the main ingredients of a district plan, has also been included in Annexure A of the Guidelines (see our Appendix B).

A CRITIQUE OF THE INTENDED MODEL

We have already mentioned earlier the implications of eliminating the programme of land reform and land redistribution from the domain of district level planning. We have also discussed the unfortunate treatment of rural employment programmes as relief and welfare measures rather than central levers of capital formation and redistribution in the intended model of district planning. These arguments need not be repeated again here. But it should be noted that this somewhat narrow demarcation of the domain of district planning in the Guidelines does violence even to the Planning Commission's own thinking on the matter. As we have pointed out earlier, the Commission's task force on multi-level planning had clearly recommended that the high priority redistributive goals of the Fifth Plan had to be achieved principally through programmes for the 'agriculture and allied activities' sector which, the task force recommended, should be planned at the district level. None of this finds expression in the domain of district planning as actually outlined in the Guidelines.⁴

Apart from the gaps in the domain of the intended model, the model also suffers from several limitations in its conception of the process of district plan formulation. Each of these is sufficiently important to merit individual discussion.

Information Flow

The first weakness of the process envisaged in the intended model appears in the area of interactions between the state level

⁴For further evidence of internal inconsistency in the Planning Commission's approach to district planning it is interesting to compare the domain of the Guidelines with that suggested by Prof. Chakravarty, a member of the Planning Commission, in a document prepared by him for designing the multi-level framework (Chakravarty 1972b).

and the district level. It was pointed out while setting up our conceptual framework in chapter 2 that the district economy is usually characterised by a high degree of 'openness'. That is to say that a very large proportion of the commodities absorbed within the district for either consumption or production usually comes in from outside the district. Similarly a large proportion of goods produced within the district is exported for absorption outside the district. A substantial portion of capital invested in the district may be coming from outside whereas a resident of the district may send capital out of the district. While this is true for the private economy, it is all the more so for government activity. Under the existing system of secretariat-field relationships, programmes in the district are highly dependent on decision, supply quotas and financial allocations which must be sorted out at the secretariat or state level.

It is for this reason that it becomes essential to have clear specification from the state level about certain minimum physical and financial allocations to the district at a very early stage of the district planning process (see Display 4). But these allocations between districts from the state level can be made scientifically only after the state level planners have been fed with the relevant information from each district. In other words, given the existing field-secretariat relationships, certain specific information flows must take place between the district level and the state level at an early stage of the plan formulation process. In the Guidelines, however, the state level planning authority or departments do not seem to appear in the picture at all until the end of the final stage (see Display 5). In not providing for district-state interaction at an early stage of the planning process, the intended model ignores a critical condition under which India's field administration operates. And in doing so the model fails to serve as a realistic guide to action. The district planning authority and the concerned agencies at the state level however cannot ignore these realities. These agencies in each state are therefore compelled to work out their own procedures for squaring the requirements of planning with the actual conditions of administration. The Guideline provides no guidance.

Design Activity

The second area in which the intended model turns out to be

somewhat disappointing is the area of operational techniques for constructing a plan. It will be recalled that the Guidelines goes into painstaking detail about what information is to be collected, how it is to be collected and how it is to be assembled in the preliminary stages of the plan formulation process (see Display 5). One would expect that this would be followed up with a description of simple techniques or exercises through which the district planners can build up sectoral programmes or construct the total district plan on the basis of the collected information.* Instead the Guidelines follows up the information gathering tasks of the preliminary stage with even more painstaking details of an almost endless round of meetings with different official and non-official agencies at the district level and what is to be discussed at these meetings.

As our description of the process in the Guidelines shows, the entire intermediate stage and a large part of the final stage of the plan formulation process is filled up with a sequence of such meetings. This sequence of meetings seems to be serving in the intended model as a substitute for the technical planning exercises which were indicated in the later stages of the required process in Chapter 2 (see Display 4).

The Guidelines goes into great detail in suggesting who should be called for which meeting and what information he can provide and so on. Presumably the district collector and other officers responsible for planning at the district level are no less familiar with these questions of who has what information, etc., than the Planning Commission. An expert body at the centre like the Planning Commission need not advise the collector and his team on these matters. But even these suggestions of the Guidelines might have been of some use if it offered any clear cut prescriptions on exactly what planning decisions are to be taken at which meetings and by whom. This is a matter of the very philosophy or approach of district planning and on this the Planning Commission could usefully take upon itself to advise the collector and his team. But precisely on this question the Guidelines remains ambiguous and open to different interpretations.

To sum up the difference between planning and *ad hocism* is perhaps simply this that in the former case the decisions are made according to some scientific criteria rather than as a collection of

individual views and judgements. A guideline on planning at the district level can therefore be expected to provide some technical guidance on what scientific criteria to use and how. The Guideline provides very detailed guidance on how to build up the data base but offers almost nothing by way of suggestions on how to use this data for scientific decision-making. As an alternative to the technical planning exercise, it offers detailed instructions on holding meetings in relation to the plan, a matter on which the local collector and his team in the district would have if anything greater competence than the Planning Commission to make judgements with regard to their own district. Even here the Guidelines fails to offer the one useful form of guidance it could have offered, *i.e.*, an unambiguous specification of exactly who should have authority to make which planning decisions.

To conceptualise the district planning process is only a special case of general decision-making process. If the latter is seen as a combination of three distinct functions, *i.e.*, intelligence activity, design activity and choice activity (Simon 1960, Dayal 1973), then we may say that the intended model of the Guidelines is principally a model of intelligent activity which remains obscure on matters of design and choice.

Planning Infrastructure

Finally we have the problem of a planning infrastructure. While it is true that the Guidelines has failed to come to terms with some of the realities of field administration in India, the basic orientation of the document still remains practical. It is concerned with the practical problems of planning at the district level, not esoteric problems of planning theory. As such it is surprising that the Guidelines fails to take note of one of the first practical constraints that the process will encounter, *i.e.*, the absence of a planning infrastructure.

By the planning infrastructure I mean the range of human and material facilities required for formulating a useful plan. As we pointed out in the preceding chapter in order to formulate its own development plan a district would require its own team of trained planners. These would have to be people with training in at least the basic techniques of operational research, statistics and economic and physical planning. They would not only have to undertake the construction of a total district plan but also train

and guide departmental officers in developing their individual sectoral programmes. The team would also have to have access to adequate information channels for generating district data. Suitable storage and retrieval systems would be required for the information as well as some facilities for data processing. There is nothing unusual or novel about these human or material facilities. They are the minimum facilities necessary for all units concerned with collection, storing and processing of information. But the problem is that none of this is likely to be available for district planning for a long time to come. Particularly important among these is of course the human factor. No serious effort at district level planning can get off the ground without a team of trained planners and they are unlikely to be available for most of the district planning boards. The Guidelines offers no suggestion for developing such expertise within the district,⁵ nor does it indicate how these specialised tasks are to be performed till such time as the expertise becomes available.

On the basis of the foregoing critical evaluation of the intended model of district level planning presented in the Guidelines it is possible to draw certain inferences regarding the likely impact of this document as a guide to action in the field of district planning.

The intended model excludes from the domain of district planning the related programmes of land reform and land redistribution. Furthermore it treats rural employment schemes as merely relief or welfare programmes instead of recognising them as a central lever of both redistribution as well as capital formation in the rural sector. The experience of recent years has proved conclusively that the survival of pre-capitalist land relations is not only the cause of extreme rural poverty but also the major constraint on rapid agricultural development. We have also seen how rural employment schemes can play a central role in the strategy of rural development through redistribution. Without including these strategic programmes in its domain, a district planning system following the intended model of the Guidelines will necessarily fail to operate as a catalyst for rural development.

However even within its narrow domain the Guidelines

⁵A note on training district planners is included in Appendix C.

would be useful if it presented an operational model of the process of district plan formulation. In this it is only partially successful. It provides very detailed instructions on exactly how to build up the data base for district planning, *i.e.*, perform the intelligence activity of district planning. Beyond this the model suffers from certain serious lapses as we have seen. It ignores some of the basic realities of secretariat-field relationship in Indian administration and for this reason alone the entire process of the intended model becomes unrealistic. Furthermore it goes into great detail in explaining how meetings can be held with whom and for what purpose, a matter on which the collector and his district team can have little to learn afresh from the Planning Commission. But the model offers little or no guidance on an actual sequence of techniques through which the data base can be ultimately translated into a plan of action. Nor does it recommend a specific decision structure for district planning, *i.e.*, who will have authority to make what decision. Finally it fails to offer any prescriptions on how to generate the necessary planning infrastructure without which no serious planning exercise can get off the ground. And these are precisely the matters on which the collector responsible for developing his district plan would require careful guidance.

In short even within its restricted domain the intended model fails to provide a realistic and operational model of the process through which a district plan is to be built up. And it is not difficult to infer that actual experiences with district planning are not likely to have been very promising where the model intended as a framework for such planning is itself so weak operationally.

4

The Reality of District Planning

In an economy of subcontinental dimensions, where there are vast differences not only in the systems of agriculture and levels of development but also in the conditions of administration, an attempt to offer a single general description of what is actually happening on the field with regard to district planning would be futile. At one end of the spectrum we have states where the concept of district planning has not even been formally adopted for field administration. At the other end of the spectrum there is at least one state, where zilla parishads have been delegated substantial powers, where the district planning agencies have already become the focal points of rural development. Nor would it be correct to infer that those states which have gone far with district planning are more development oriented. In one state, where district planning of the kind we have been discussing has not been taken up, the rates of growth in recent years have been among the highest in the country and the pace of rural development is known to be highly impressive.

The account which follows is not a description of the experience in these typical cases. It should be seen instead as being representative of the large majority of states that come somewhere in between. We have tried to put together here a sort of 'average' picture of the experiences with district planning in India.

There are two ways of doing this. One could take up one department at a time and describe the complete sequence which was followed in building up the plan for the sector governed by that department. This method would correspond more closely to the real situation where the plan formulation process basically occurs independently within each department (as we shall see below). However this would not convey an integrated impression of the phases through which the development plan for the

district as a whole is built up.

For the purpose of getting this integrated picture it is more useful to look at the formulation of the district plan as a whole and follow the different stages through which the total plan is built up, examining at each stage what has been done in the different departments. I have followed this procedure. But it is important to remember that the stage-wise schematisation is somewhat artificial in the sense that every department does not necessarily go through exactly the same stages in building up its plan. The reader will also find it useful to keep in mind the basic structure of field administration within which district planning occurs. This has been represented in Display 6.

The centre of the district administrative system is the collector himself. All departments in the district are under him just as he is the link between administration of the district and the departments in the state secretariat $S_1 \dots S_N$. However it will be noticed that a direct vertical linkage also operates between each district department, $D_1 \dots D_N$, and its corresponding parent department in the state secretariat, in some cases through a circle officers. This has been demonstrated by the broken lines between S_1 and D_1 .

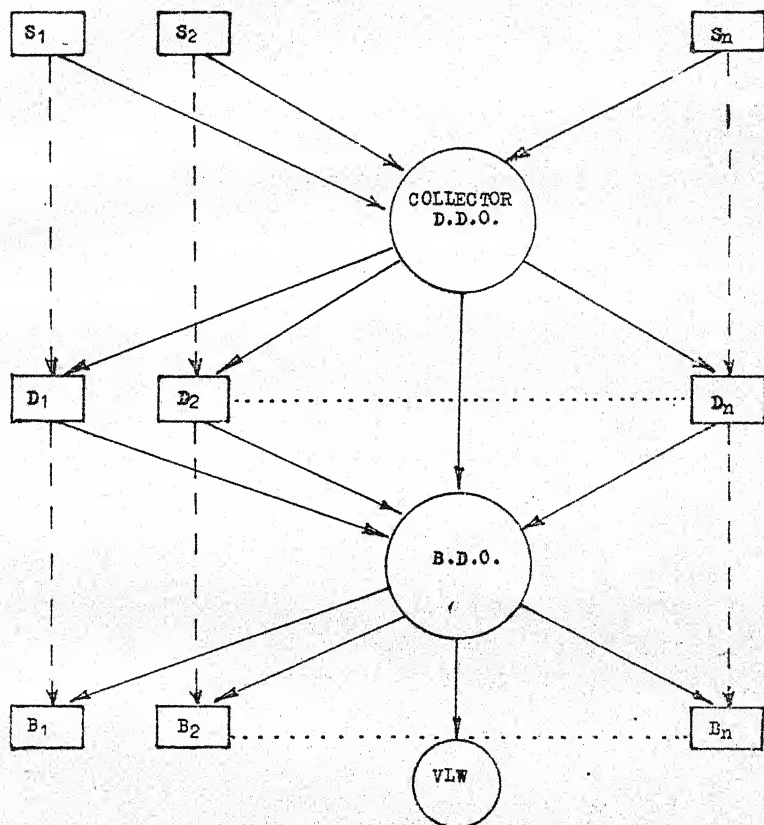
The collector is also the district development officer, responsible for development of the district. For this task he has under him a team of block development officers, each one in charge of one of the several blocks into which a district is divided. The block development officer, in turn, controls a team of village level workers, each worker being responsible for programmes and other developmental tasks in one or a few villages. Along with these village level workers the block development officer also has under him cadres of individual departments such as stockmen for the animal husbandry department, tubewell operators for the tubewell department and so on. But once again these departmental cadres are in direct linkage with their corresponding departments at the district level. These have been demonstrated by the broken lines linking $B_1 \dots B_N$ with the corresponding $D_1 \dots D_N$.

STAGE ONE

The district planning process usually begins with a flow of very detailed instructions within individual departments from

Display 6

THE STRUCTURE OF FIELD ADMINISTRATION



DDO—DISTRICT DEVELOPMENT OFFICER

BDO—BLOCK DEVELOPMENT OFFICER

VLW—VILLAGE LEVEL WORKER

S_1 - S_n —DEVELOPMENTS AT THE STATE
SECRETARIAT

D_1 - D_n —DISTRICT DEVELOPMENT OFFICERS

B_1 - B_n —BLOCK LEVEL DEPARTMENTAL
FUNCTIONARIES

the state level to the district level departmental officers instructing them to: (a) collect information; (b) submit their assessments of the existing situation with respect to activities of their own department and related aspects; and (c) submit plans for programmes which could be taken up in their district by the department. The instructions include samples of proformas giving the exact content and format of data to be collected. Detailed guide points for assessing the existing situation and even specifications for planning future programmes are also sent down.

Agriculture

In agriculture, for instance, apart from information gathering on all aspects of the district's agriculture, the department is also instructed to develop its quantitative targets for production. Often these targets have to be formulated not on the basis of the local data but according to formulae laid down at the state level. For example, in one state where the policy is to achieve self-sufficiency in food for each district, the basis for calculating the target on foodgrains was laid down as a standard formula:

Population x 454 gms = daily cereal requirement

Population x 85 gms = daily pulse requirement

Each district had to adopt this formula

The desired overall growth rate of agriculture was also specified, thus leaving only some residual cropping patterns to be determined. From these production targets to arrive at, seed, fertiliser and other requirements and thence the required financial outlays is merely a question of multiplying the output targets by well known norms of input co-efficients and these in turn by prices. Thus the agricultural sector has been collecting detailed information and yet setting up targets according to independent formulae set at state level. These formulae, moreover, are based on objectives, e.g., self-sufficiency, which may have no relationship with any information or assessment of the specific situation in the district.

Animal Husbandry

In the animal husbandry department, the district level officer similarly receives samples of proformas for gathering information on the cattle programme and related aspects, e.g., family and

holding sizes, proportion of land irrigated and cropping patterns—especially production of fodder. Apart from proformas, instructions are also sent to work out future cattle development programmes on the basis of certain formulae. For example, in one case the state level policy specifies that each district should be equipped with: (a) 1 veterinary surgeon per 5,000 breedable population, and (b) 1 stock man per 100 breedable population.

The district level targets are calculated according to these formulae.

Cooperatives

In the department of Cooperatives, similarly, detailed instructions were sent down from above, asking for a document which includes data on the extant situation, *e.g.*, area-wise and category-wise breakdown of the societies, the number of members, share capital, loans disbursed, etc. A review of the major problems and year-wise targets for the 5th Plan for all the above mentioned items also had to be included.

Industries

In the Industries department there are sometimes two separate agencies. One is exclusively responsible for the development of industrial estates. The other is responsible for all industries in the district other than those located in these estates. Instructions are issued from the state level for joint action in these two agencies. Essentially the instructions for this sector also require that a document be prepared listing growth of industries and activities of the department, giving an assessment of the major constraints and laying down targets for the various activities of the department, *e.g.*, development of estates, financial assistance, supply of machinery and raw materials, etc.

Irrigation

In the irrigation sector because of the technical nature of the projects local conditions and close interdepartmental coordination, at least between the departments responsible for the different types of irrigation, become even more important than in the other sectors. It is, therefore, important to examine how planning is undertaken in this sector in somewhat greater detail. What follows is an actual case history for one state.

In a letter issued on July 7, 1973 the Superintending Engineer, Investigation and Planning, of the state, appointed an executive engineer connected with ongoing projects in each district as the irrigation plan coordinator for that district. This officer was made responsible for coordinating plan formulation for all types of irrigation projects and developing an integrated plan for the entire district.

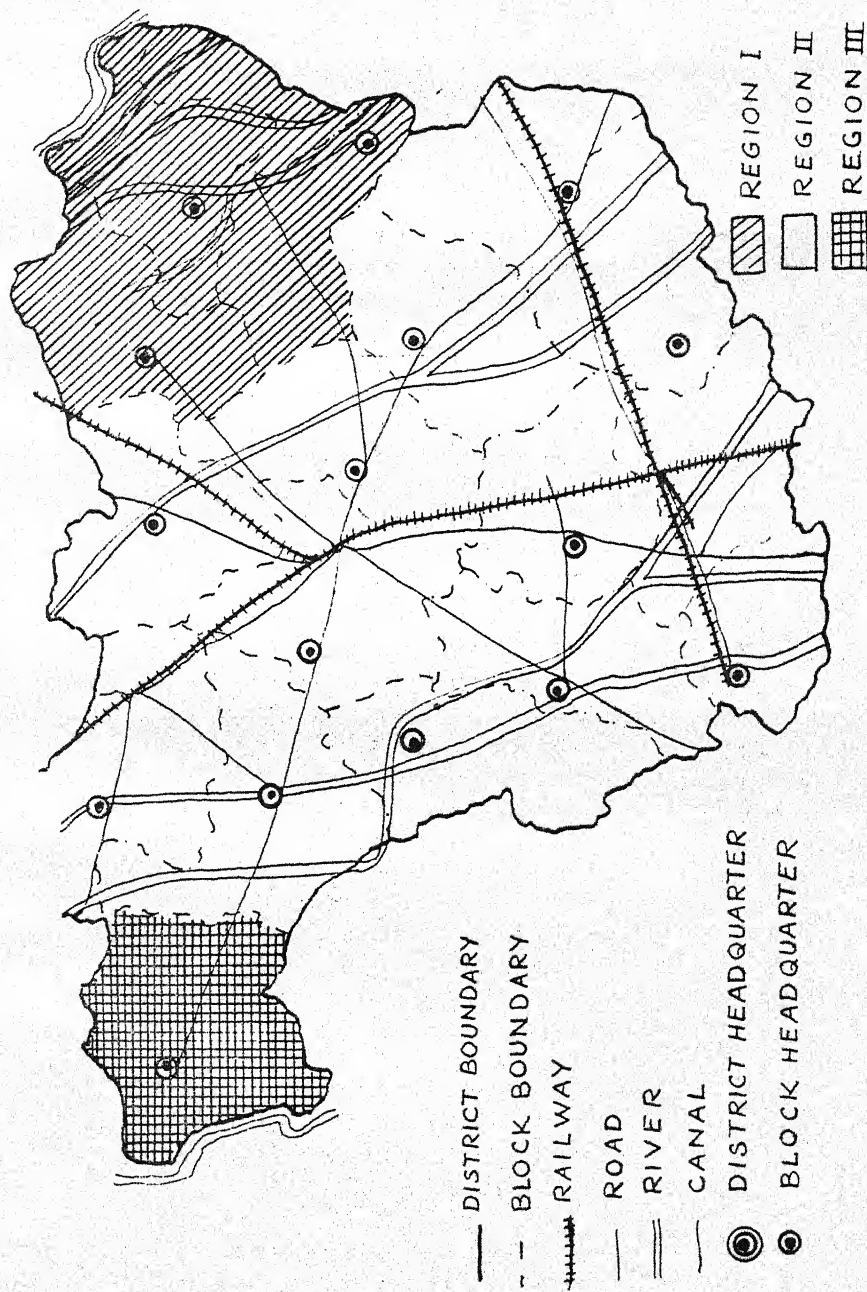
Together with the letter a special set of detailed guidelines were issued.¹ These guidelines not only included detailed proformas, listing items of information to be collected and their format, as in the other departments, but also specific instructions for preparation of a 1" = 1 mile map giving complete natural and man-made physical features of the district. Interestingly, while specifying the items of information which had to be submitted regarding future schemes the special guidelines for the irrigation department did not actually lay down formulae for setting targets as in some of the other departments—though the general objective of maximising the irrigation potential was suggested.

In theory, these departures seemed to represent an attempt to push down the responsibility for planning decisions to lower levels. But in practice the attempt was very limited. Firstly, canal irrigation schemes located in the district are only portions of larger inter-district schemes. Obviously these could not be planned at the district level. Only minor irrigation and state tubewell schemes could be planned at the district level to dovetail with the higher level schemes in order to achieve efficiency in conjunctive water use. Secondly, even within these two categories, the Assistant Engineer in charge of minor irrigation neither collected information nor formulated programmes under the guidance of the irrigation coordinator. Instead he got instructions directly from his superiors at the circle and state levels—including specific targets, *e.g.*, minor irrigation should cover all areas left by other sources such that:

- (a) The entire unirrigated area should be covered in the 5th plan; and
- (b) ultimately total irrigation potential should include 200 per cent of net cultivated area.

¹These special guidelines, together with the letter, have been reproduced as Appendix D.

Display 7
MAP OF DISTRICT



Thus, in spite of certain apparent differences, the scope of district level planning for the irrigation sector also was reduced to gathering information and filling in some residual details around targets decided at a higher level.

It is easy to see from this brief description of how district planning begins that what happens on the field is in sharp contrast to what is envisaged in the intended model of the guidelines. In particular we see that planning begins not at the district level but within each department at the state level.

STAGE TWO

The integrated aspect of the district planning approach begins appearing in the second stage when district officers from the different departments are brought together at a meeting where ostensibly an overall development strategy for the entire district is worked out and programme regions, each with its own particular strategy of development, are identified.

On closer examination, however, this aim at integration does not appear to be very substantive. As we have seen, the rules for target setting in each sector are already specified from the state level in the first stage. Formulating an integrated strategy for all sectors at the second stage can therefore mean little more than mere reporting by each department of what rules it will have to follow in setting up its own targets.

As for identification of subregions within a district for purposes of setting up integrated programmes, one particular case of subregion identification was investigated. It has to be recalled in this context that the whole purpose of subregion identification is to locate spatial clusters which are homogeneous in conditions relevant for development programmes. This would include soil and topography, cropping patterns, agrarian systems, levels of infrastructure development, population density, etc. The demarcation of a programme region makes sense only if the areas located within the region are similar in these respects. In the investigated case the district spanned about seventy miles from west to east between two major rivers and about forty five miles from north to south. As is evident from the map (Display 7) the eastern and western wings were identified as separate subregions. Upon investigation it was revealed that

the regions had been identified on the basis of topography and soil type only. This in itself is futile because in ignoring all other criteria for identifying subregions the whole purpose of such identification is lost. Furthermore even topography or soil type do not seem to have served as genuine criteria because it was found that different soil types and lowland and upland had all been clubbed together within the same region.

If this random reported here is representative then it would appear that the identification of a subregion is also generally undertaken as a mere formality only because it has been stressed as an important task in the guidelines. The second stage of the district planning process that actually operates in India has to be seen therefore as a rather feeble and unsuccessful attempt in replacing the traditional sectoral approach to planning with the new integrated area approach.

STAGE THREE

The third major step in the process of district plan formulation, the central phase of the entire process, is the actual collection of information and the formulation of 'programmes' by each department for its own sector.

Agriculture

Information processing is a routine function of the agriculture department. Such information is collected at the village level by the Village Level Workers (VLWs). These are then consolidated by Block Development Officers (BDOs) and sent to the district as block-wise breakdowns of all items of information. However, the collected information is not necessarily used as the basis of programme formulation. As we have seen, crop targets often have to be worked out according to specifications from the state level and the input and financial requirements are calculated accordingly. The financial targets, in turn, are split up between different sources on the basis of an approximate idea of past trends. These targets, together with a summary of the existing agricultural situation, are then treated as the tentative plan for this sector. A typical district agricultural 'plan' for the Fifth Five Year Plan showing targets of acreage under different crops, input supply and finance is reproduced in Display 8.

Display 8

FIFTH PLAN TARGETS

Agriculture

<i>Cropping Pattern (Hectares)</i>	<i>Annual 1974-75</i>	<i>Annual 1978-79</i>	<i>Annual 1988-89</i>	<i>Fifth Plan Period (Total)</i>
1. Paddy	17,333	21,660	32,000	
2. Jowar	2,332	2,448	3,623	
3. Bajra	90,917	99,198	146,818	
4. Wheat	2,12,496	2,33,940	3,46,231	
5. Maize	73,351	78,966	1,16,870	
6. Barley	40,491	44,498	65,857	
7. Gram	5,300	6,684	9,895	
8. Peas	12,720	16,044	23,745	
9. Pulses	48,057	53,314	78,905	
10. Tilhan (Oil seeds)	8,456	9,957	14,736	
11. Soya Bean	80	174	250	
12. Suraj Mukhi	155	250	322	
13. Groundnut	3,180	3,996	5,914	
14. Cotton	10,030	11,335	16,776	
15. Additional area under Sugarcane	15,043	17,345	25,670	
16. Additional area under Potato	848	1,052	1,557	
Fertiliser Consumption (Metric Ton)				
Nitrogenous (N_2)	21,450	28,887	42,752	1,26,208
Phosphatic (P_2O_5)	10,264	14,381	21,283	61,912
Pottasic (K_2O)	8,688	12,021	17,791	51,814
Financing: Agency Wise (Rs.)				
Seeds				
Agriculture	77,31,852	87,17,884		
Cooperative	1,54,63,704	1,74,35,768		
Private Sector	2,31,95,556	2,61,53,653		
Total	4,63,91,113	5,23,07,304		24,00,00,000
Fertilizer				
Agriculture	1,65,64,520	2,26,40,840		
Cooperative	3,31,29,040	4,52,81,680		
Private Sector	4,96,93,560	6,79,22,520		
Total	9,93,87,120	13,58,45,040		59,00,00,000
GRAND TOTAL				83,00,00,000
(Fert. & Seeds)				

Animal Husbandry

The animal husbandry department collects information through its veterinary surgeons and stockman and compiles these together with a report on the progress of the cattle development programme. These are put together with future schemes, based on the state level specifications mentioned earlier, to make up the tentative plan for this sector.

Cooperatives

In the cooperatives department a document is prepared according to the instructions mentioned above. Kshetra Vikas Samitis, Area Development Officers (ADOs) and supervisors collect information on the membership, capital, disbursement of loans etc. of various types of cooperatives in the different blocks. Together with this information, and a note outlining the major problems of cooperative development in the district, some targets are also laid out for the items mentioned above. This constitutes the 5th Plan draft of the cooperative department of the district.

Industries

In the industries sector information is gathered by the Area Development Officer. It is collected directly in the case of industrial estates and through the BDOs, via the industries officer, for all other industries. Mainly this information is about the growth of different types of industries in the different blocks, the progress of the industrial estates programme, registration and financial assistance for entrepreneurs, the availability of machinery on hire purchase and the supply of raw materials, etc. These statistics, together with a description of the major bottlenecks for further industrial growth, make up the draft 5th Plan of the district for the industries sector.

Irrigation

In the irrigation sector, as we saw above, special provisions are made to develop an integrated plan of conjunctive water use under the irrigation coordinator of the district. However, canal irrigation schemes are already determined at a higher level. Similarly, targets for the different types of minor irrigation works are set at the circle level. Consequently there is no substantial

opportunity for developing a coordinated irrigation plan at the district level. For instance, the minor irrigation department collects statistics through the BDOs and its own mechanical inspectors on the basis of which an assessment is prepared. However its targets are decided on the basis of instructions sent from above. Meanwhile the tubewells division prepares its own independent plans. All these plans are supposed to be consistent with one another but obviously this consistency is not achieved. Private tubewells under the minor irrigation department continue to be sunk in the command area of state tubewells while state tubewells are developed independently of surface water irrigation. Meanwhile, water tables keep falling continuously with the discharge rate exceeding the rate of recharge.

STAGE FOUR

After each department has prepared its tentative plan, the district plan formulation process moves into its fourth major phase. Each department sends its 'plan', *i.e.*, the information, assessment and future programmes to the circle or state headquarters of the department for scrutiny and approval. Two points are worth noting here.

Firstly, the so-called 'programmes' are not programmes really but merely a list of annual targets. Even these targets, one must repeat, are not rationally derived from the collected information and assessment of each department. Instead they are determined mostly according to formulae set at the state level, irrespective of local conditions in the district.

Secondly, no non-official groups or non-departmental agencies are formally involved in any way in this planning exercise in spite of the great emphasis laid on discussions with such groups and agencies in the Guidelines (Planning Commission, 1964).

In this fourth phase, *i.e.*, departmental discussions with the circle or state level about the tentative plans, changes are sometimes imposed from above against the judgement of the district level personnel. A dramatic example of how such imposed changes are sometimes totally ridiculous is revealed by the irrigation planning case study which I have already referred to earlier. In this particular case, of the total cultivated area of 3,94,897 hectares in a district, 80 per cent was already under irrigation. At one stage of the discussion the district level officer assessed that after

allowing for coverage by state tubewells and canal irrigation, the total area left over for coverage under minor irrigation would be about 26,204 hectares to reach saturation. Against this he was instructed to raise the target to as much as 75,000 hectares. He then distributed this target over the five years as follows:

1974-75	1975-76	1976-77	1977-78	1978-79
13,231	13,231	15,801	15,801	16,936

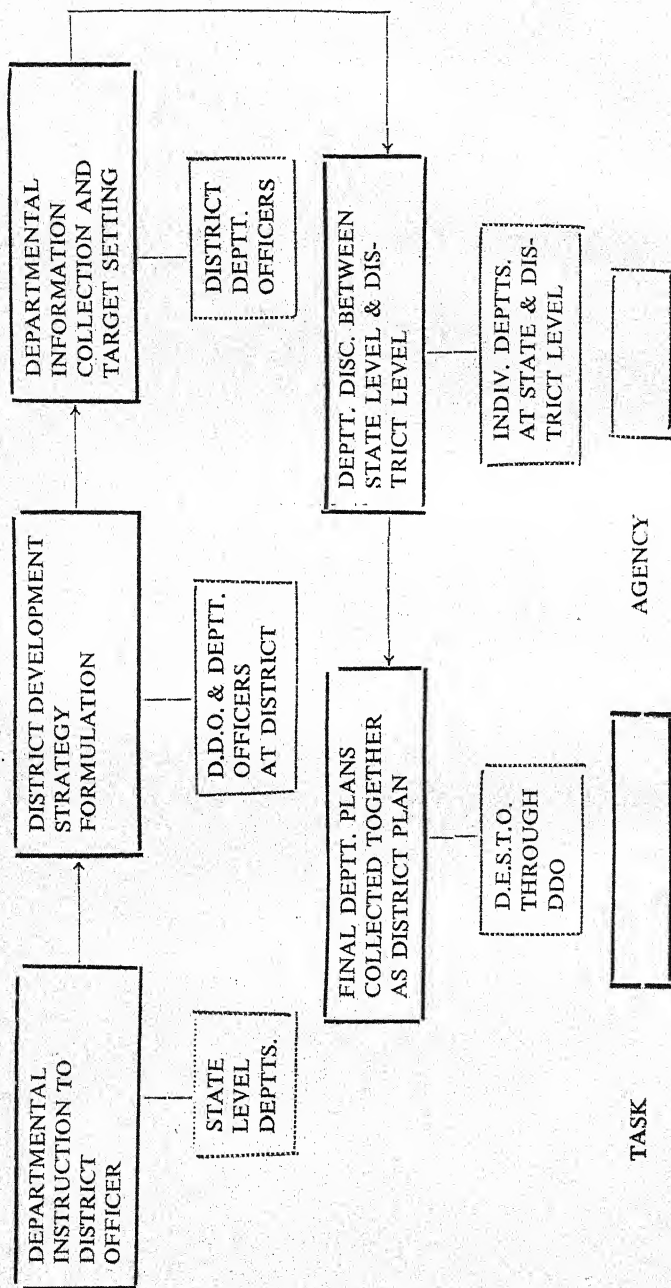
These figures have subsequently been adopted as targets in the district plan for minor irrigation alone, leaving hardly any area to be brought under tubewell and canal irrigation. But the plan of the district also includes a major canal irrigation scheme as well as a substantial programme of tubewell irrigation.

STAGE FIVE

Finally, after each department has finalised its 'plan' the 'plans' are sent to the District Planning Officer. It will be noticed that it is only in this fifth and last stage of the plan formulation process, after each department has already finalised its plan under instruction from its own departmental headquarters, that any attempt is made towards arriving at a consolidated district plan. Since the departmental plans are already finalised prior to this stage, this so-called 'consolidation' is usually little more than a mere putting together of sectoral targets.

In any case, it is quite evident that with the existing support staff the District Planning Officer (DPO) is in no position to seriously undertake the consolidation task. The only staff support he has is the District Economics and Statistics Officer (DESO) and his handful of assistants. And even the Economics and Statistics Officer is not trained for any kind of planning. Nor does he have a minimum of planning literature to draw upon. More importantly, he has no staff to check and analyse data made available by the other departments through the DPO. As the DESOs themselves admit, the most they can do is to simply compile all the departmental plans sent to them through the DPO, according to the proformas sent by the State Planning Board, add some descriptive notes and a general overall assessment for the district, as suggested in the Guidelines, and pass off the resulting document as the 'Plan' for the district.

Display 9 THE OPERATING DISTRICT PLANNING PROCESS



From our description of the district planning process that is actually operating it is possible to identify certain features which stand out in sharp contrast to the intended model of the Guidelines which we examined in the preceding chapter.

(1) The first of these, is a persistence of departmental initiative at the state level as opposed to the local initiative emphasised by the Guidelines. As we can see from a stylised model of the operating sequence which is reproduced in Display 9, the whole process of planning for the district begins independently within each department with instructions for collecting information and setting targets flowing down from the state level to the district level departmental officers. The actual formulation of the plan is also done independently within each department and targets are set principally according to instructions from the state level rather than the guidance of the local district planning board. The pruning, scrutiny and finalisation of the plan is also done departmentally in dialogues between state level and district level. In short, the initiative which is supposed to belong to the local district planning board has in reality remained with the state level departments.

(2) A necessary consequence flowing from this persistence of the departmental initiative is the very low level of coordination or integration between the targets or programmes of different departments. As indicated in the operating model in Display 9 an attempt is made to enforce inter-sectoral integration in the second stage of the planning process. But we have seen that the attempt has not been very successful. Once again at the final stage the targets and programmes of the different departments are brought together in the final district plan. But this is merely a collection of sectoral plans which have already been formulated within each department. No real integration is possible at this late stage. This absence of integration is again in sharp contrast to the intended model of the Guidelines where the basic emphasis is precisely on an integrated area approach.

(3) A third contrast between the operating model and the intended model is the elimination to a great extent of the endless rounds of discussions with numerous official or non-official agencies which have been spelt out in painstaking detail in the Guidelines. It was pointed out in our evaluation of the Guidelines that its position on the concrete purpose, *i.e.* the decisions

to be made, etc., of these meetings was ambiguous and confused. In practice they would turn out to be very expensive in terms of time and resources without leading to any specific progress in terms of plan formulation. It is not surprising that much of it is dispensed with in actual operation.

It is easy to see from these sharp differences that the process of district planning that is actually operating is very different from the intended model of district planning which we find in the Guidelines. However, the fact that the intended model has not been implemented cannot be seen as a failure of administration. The intended model has not been implemented because it cannot be implemented. In our evaluation of the Guidelines it was argued that the intended model cannot serve as an operational one, a guide to action, because it is unrealistic. It is unrealistic in the sense that it fails to recognise some critical realities of the system of field administration in India, especially the relationship between field administration and the secretariat.

This unrealism is a luxury which the administrator on the field cannot afford. He is charged with the responsibility of implementing district planning. This he can do only within the existing system of field administration, its attendant conditions and numerous compulsions. But the Guidelines laid down for him are incompatible with the system. Whether we choose to describe the system as dysfunctional or the intended model as dysfunctional depends entirely on the perspective we adopt. The important point is that we cannot have both. One or the other has to give way. The administrator is in no position to change the system in which he operates. But he is in a position to improvise deviations from the intended model to arrive at a workable or operational model which is compatible with the existing system of field administration and secretariat-field relationship. This is exactly what has happened.

It is very easy to demonstrate that the existing structure which has been stylised as a model in Display 6 would necessarily lead to the operational model of district planning which we have identified in Display 9. The large bulk of funding for governmental programmes at the district level come from the state level apart from some local resource mobilisation. At the state level the plan allocations are made departmentally or sectorally as represented in the rows S_i , $i=1...n$ in Display 10. The same plan

funds are also allocated districtwise as represented by the columns D_i , $i=1 \dots m$. Consequently the funding earmarked to each sector in each district is already pegged by the allocation of plan funds at the state level, *e.g.*, the sum a_{ij} allocated to sector i in district j in the matrix in Display 10. Moreover, the allocation made to a sector, or rather to the department responsible for the sector, is tied to specific types of projects or programmes. It is easy to see now that the only choices or decisions which can actually be made by a particular department in a district is about location within the district, phasing and other second order problems. The possibility of developing a genuinely integrated plan for the district, where the district rather than a sector is the unit of planning, is almost impossible under the circumstances.

Apart from highlighting the sharp deviations between the operating model and the intended model of the Guidelines our examination of the reality of district planning also identifies gaps in the operating model which are derived from the intended model itself. The first of these is a preoccupation with target setting for agricultural activities. In India agricultural production is carried on almost entirely on privately owned farms. Levels and patterns of agricultural production are therefore a function of private decision-making within the range allowed by natural factors such as soil, climate and topology. Under the circumstances it seems futile to set targets for agricultural production as part of the district development plan. This is especially true where any public intervention towards changing property and production relations in agriculture has been excluded from the domain of district planning. What is far more important is to recognise that public programmes of rural development will essentially have to be supportive programmes aimed at facilitating the growth of production on private farms (see Display 1). The focus of district planning should therefore be directed at carefully identifying and developing such supportive programmes around scientific projections of private agricultural production. The present emphasis on setting up targets seems to be futile.

Secondly, with regard to designing these supportive programmes we have already seen that the intended model in the Guidelines actually provides very little guidance on the technical methods of designing and planning such programmes. This has reflected itself on the field in the absence of any careful and

rigorous programme planning in most areas.

Display 10

STATES ALLOCATION MATRIX IN DISTRICT PLANNING

DISTRICTS	D_1	D_2	D_3 D_m
SECTORS			
S_1	a_{11}	a_{12}	a_{13} a_{1m}
S_2	a_{21}	a_{22}	a_{23} a_{2m}
S_3	a_{31}	a_{32}	a_{33} a_{3m}
\vdots			
S_n	a_{n1}	a_{n2}	a_{n3} a_{nm}

Note :

1. Sectors are represented by the rows S_i , $i=1...n$
2. Districts are represented by the columns D_j , $j=1...m$
3. a_{ij} is the Financial Allocation for Programmes in Sector i of District j determined in the Plan Budget at the State Level.

Finally, we have referred earlier to the problem of planning infrastructure and expertise. The Guidelines has very little to say on this question and we find consequently that facilities and expertise for any genuine planning at the district level are almost non-existent.

In view of these gaps and the fundamental inconsistency between the integrated area-approach of the intended model of district planning and the existing system of field administration, it is not surprising that district planning as it exists today is no more than "extensive though unstructured inventories and a rudimentary analysis which is not amenable for planning purposes," such that, "planning for districts has remained dormant, a mere idea and a desirable goal" (Mathur 1973).

5

Conclusions

We started out by posing a set of normative questions with regard to district planning. Namely whether district planning is desirable, if so what activities should it cover and what is the desirable process of formulating a district plan? We ended up by attempting answers to a set of positive questions. Namely, what is the intended model of district planning which has been adopted in India? How does district planning actually operate in India? And so on.

From our search for answers to this large range of questions with regard to district planning we arrive at conclusions which are challenging, to say the least. The logic of district planning as the instrument of state intervention for rural development, within the larger framework of multi-level development planning, is compelling. District planning as it is actually operating leaves much to be desired if it is to perform the role assigned to it in the above perspective. A measure of what remains to be done in terms of the domain and process of district level planning is given in fact by a comparison of the existing reality of district planning with the required model which emerged as the solution to our normative questions. The required model serves, as it were, as a sounding board for the operating model.

The operating model is nothing but a reflection of the intended model mediated through the realities of the planning environment, *i.e.*, the system of agricultural production and the system of field administration in India. It is an interpretation of the Guidelines by administrators who have to carry out the task of district planning in a manner consistent with the systems and conditions in which they function. Consequently much of the work which remains to be done applies to the intended model of the Guidelines itself.

First of all we have seen that the strategy of rural development which is implicit in the domain of the Guidelines does not recognise the central importance of land reform, redistribution and rural employment schemes for this sector. This eclecticism towards the system of agricultural production constitutes a major inadequacy of the intended model. Secondly, the process of plan formulation in the intended model ignores certain basic realities of India's field administration in particular the relationship between the state secretariat and the district collectorate. This is eclecticism towards our system of field administration and it constitutes the second major area of inadequacy in the intended model of the Guidelines.

This eclecticism of the Guidelines both towards the system of agriculture and towards the system of field administration seriously limits the operational utility of the Guidelines. In its failure to explicitly recognise the system of agricultural production and field administration and locate itself within this reality, *i.e.*, either adopt itself to these systems or suggest modifications in the systems, the intended model has reduced itself to an unreal exercise. Consequently it fails to serve as a guide to action. And the acting agent, *i.e.*, the administrator, is forced to find his own way. On the question of relating the model to the system of agricultural production we have already mentioned that land reform, land redistribution and rural employment schemes must come into the domain of district planning not only as social welfare tasks but as crucial developmental tasks. As for the system of field administration, before we take up this question I would like to point out certain measures which can already be achieved within the existing framework.

These measures relate to the development of an adequate planning infrastructure at the district level. This is a minimum precondition if district planning is to be taken up seriously. The most important task here is to develop substantial staff support to the district planning board, a staff which is actually competent to execute technical jobs in planning. Since a team of trained planners is unlikely to be available in the district, perhaps the most cost-effective option is to undertake large scale training of the district level officers themselves. After intensive training, these planners could serve as a group of experts to serve the district planning board in each district. They could also function

as trainers for providing guidance locally to officers in individual departments who are charged with formulating sectoral plans. A note on training for district level planners has been enclosed as Appendix C. These trained teams of planners attached to each district planning board would also have to be provided with adequate facilities for information procurement, storage and retrieval as well as means for mechanical data processing with enough capacity to process data for a district in a reasonably short period of time.

The development of a planning infrastructure at the district level is important. But this by itself would not take district planning very much beyond what it is today. District planning will become the nodal point of state intervention for rural development only when there is a shift in the underlying strategy of rural development coupled with major structural changes in the system of administration which might remove the dysfunctionality between the existing system and the assigned role of district planning.

We have seen that one of the major problems of effective district planning is a stubborn persistence of departmental or sectoral planning rather than spatial planning where the district space becomes the unit. We have also seen that this persistence of 'departmentalism' is actually built into the existing structure of administration where the spatial boundaries of a district collector's area of control, *i.e.*, the departments operating in his district, overlaps with the sectoral boundaries of a secretariat department's area of control, *i.e.*, the units of the department functioning in each district. Clearly, the elimination of this fundamental dysfunctionality between the requirements of district planning and the existing structure of administration would require a very bold attempt at reorganisation from the state level downwards in an administrative system which has entrenched and consolidated itself over a long period going back to the colonial era.

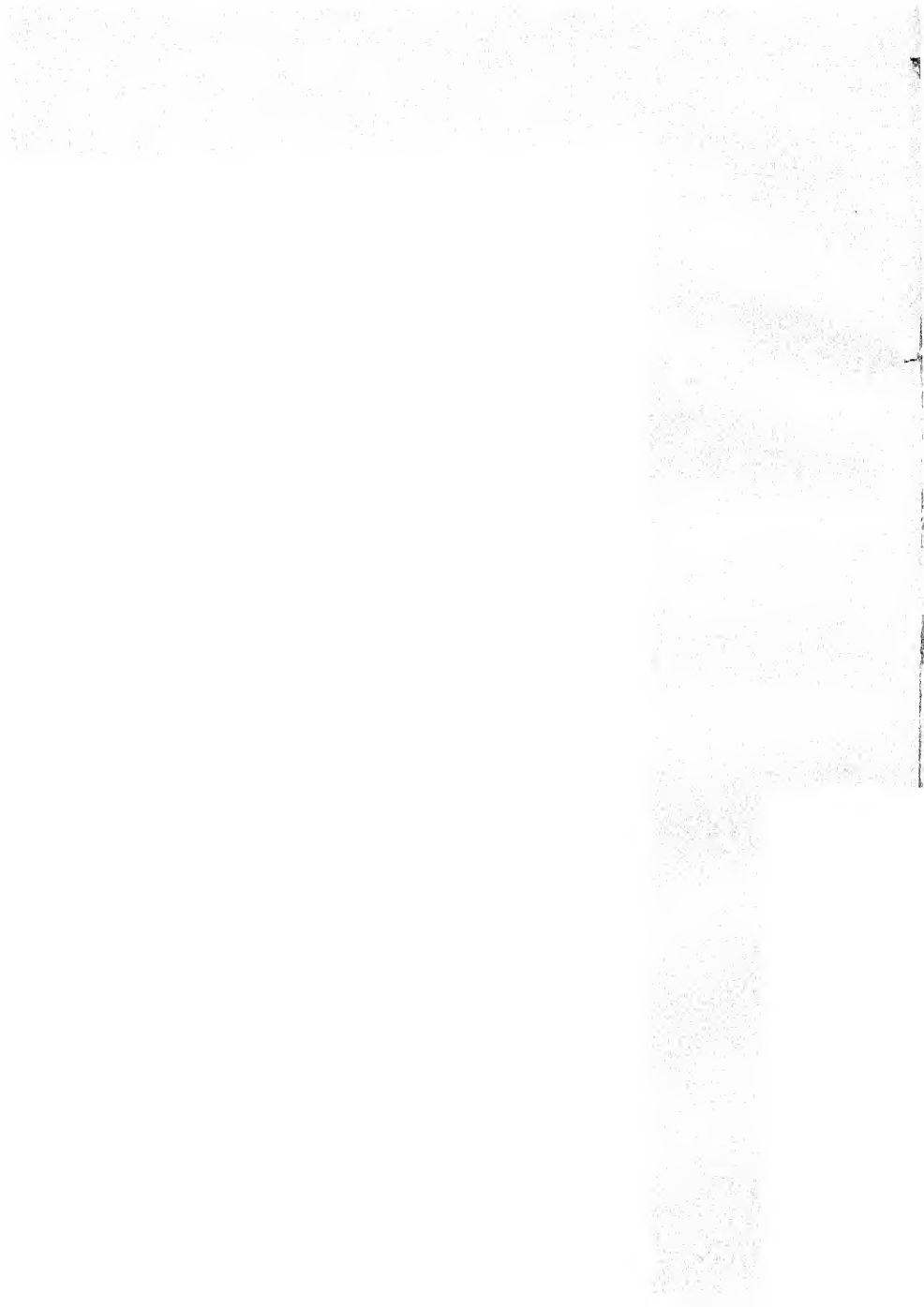
Here I have only tried to focus attention on the *need* for structural changes in the systems of administration and not actually offer a prescription for such change. But it is perhaps not out of place to think aloud on the broad directions such change may have to take. One can think of two approaches. One way of eliminating the dysfunctionality is to increase the autonomy of the district unit of administration, somewhat along the lines of

state level autonomy in centre-state relations. Specifically, this would require that a large part of its public resources be mobilised and controlled by the district itself. And also that it have a larger say in the utilisation of resources still allocated by the state. This would also require that each district administration have independent decision-making authority and control over the whole range of rural development programmes except those, *e.g.*, multipurpose irrigation projects, which transcend individual district boundaries.

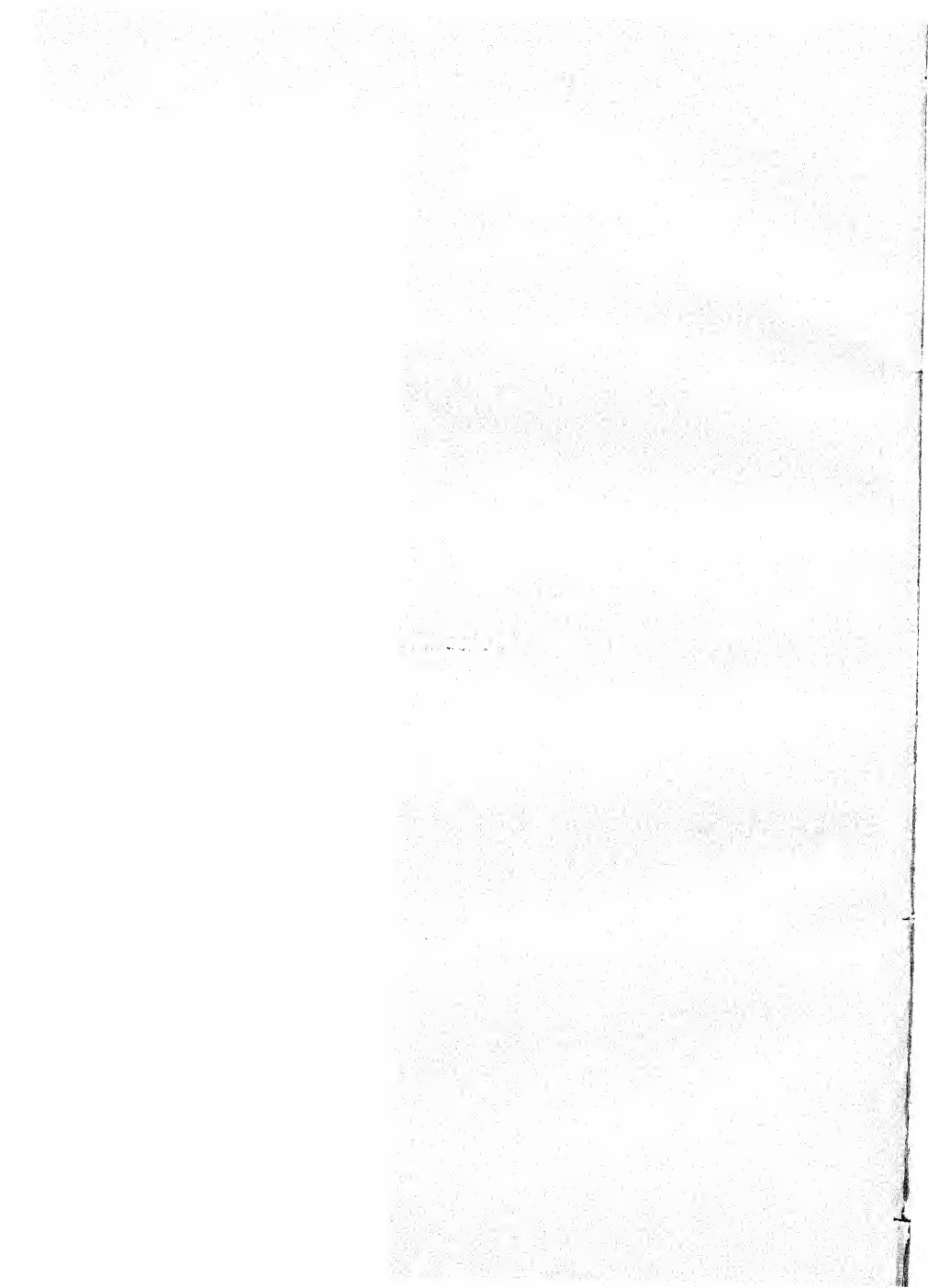
However the very concept of an autonomous district seems to me to be quite utopian and completely out of tune with the realities of the Indian situation. Both the desirability as well as the feasibility of this approach is open to a number of questions. An alternative approach, which is perhaps more practical, is to leave the basic structure of field administration undisturbed and intervene instead in the departmental structure of the state secretariat. At present, departments in the secretariat correspond to sectors of government activity. Apart from the initial transitional problems, there seems to be little to lose and much to be gained from changing over to a system where each department should correspond to a spatial unit, *i.e.*, a district, rather than a sector or type of government activity. Each department in the secretariat would then be a development authority for a district rather than an activity. By this shift from an activity based line of demarcation of departments to an area based line of demarcation we would leave the basic control relationship between the secretariat and the districts undisturbed. We would also leave the system of field administration in the district undisturbed. And at the same time we would have eliminated the basic dysfunctionality between district based planning and department based administration in the area of rural development. This approach of a secretariat operating as a collection of regional development authorities appears to hold great potential for major innovations in development administration.

Finally, I would like to emphasise that throughout this study I have concerned myself only with a set of technically required conditions for the success of district level planning. These technical requirements constitute only the necessary conditions of successful district level planning, not the sufficient conditions. An enquiry into the latter would require an explicit analysis of socio-political

feasibility, conflict of interests and decisive interest groups. For, it is as true of the district planning process, as of any other planning process that any plan, however well formulated, is workable if, and only if, it is not in conflict with politically decisive interests.



APPENDICES



APPENDIX A

GUIDELINES EXTRACT

Forms of Data Collection for District Planning

Statement I	Basic data of the district.
Statement II	Land utilisation—sub-region and blockwise data position as on District
Statement III	Size of holding District
Statement IV	Area under different crops—blockwise and sub-regionwise.
Statement V	Forests and soil conservation sub-regionwise District
Statement VI	District.....Year.....
Statement VII	Irrigation sub-region total cultivated area
Statement VIII	Irrigation—district total cultivated area—net — gross.
Statement IX	Animal husbandry—sub-region and blockwise.
Statement X	Animal husbandry sub-region and blockwise information. District.....
Statement XI	Horticulture sub-region and blockwise
Statement XII	Communications—as on.....District

Statement XIII	Market Centres* and availability of different services	District (Yes/No)
Statement XIV	Storage facilities sub-region and blockwise	
Statement XV	Processing facilities	Year.....
Statement XVI	Banking and credit facilities	
Statement XVII(a)	Education	
Statement XVII(b)	Education	
Statement XVII(c)	Education	
Statement XVII(d)	Education	
Statement XVIII	Public health	
Statement XIX	Water supply	
Statement XX(a)	Labour and employment	
Statement XX(b)	Persons registered at the employment exchange	
Statement XXI	District.....	Year.....
Statement XXII	Power	
Statement XXIII	Industries	
Statement XXIV	Industries (<i>Contd.</i>) Availability of facilities at growth centres.	
Statement XXV(a)	Cooperative institutions in district	
Statement XXV(b)	Cooperative Institute sub-region and blockwise.	
Statement XXV(c)	Cooperative institutions position as on....	District.....
Statement XXV(d)	District.....	Position as on
Statement XXVI	Panchayati raj bodies in the year.....	
Statement XXVII	Graduation of blocks by level of development.	

APPENDIX B

GUIDELINES EXTRACT

Suggested Format for District Plan Document

SECTION I—ASSESSMENT OF THE EXISTING SITUATION

Chapter I: Introduction—Giving a brief account of the physico-geographical conditions in the different sub-regions of the district in terms of elevation, general topography, rainfall, rivers, and streams, drainage, soil structure, vegetation, flora and fauna, the composition and distribution of population in terms of rural/urban habitations and vocations, the special economic, social or cultural characteristics of the district and the level of development in different sub-regions of the district.

Chapter II: Infrastructure and Social Services—Describing the variety, coverage and performance of the facilities and social services available in the various sub-regions of the district, with particular reference, in the case of economic infrastructure to communications, marketing, credit, storage, processing and servicing facilities as well as to the distributive network of the power and irrigation systems and in the case of social services, to the facilities for education, vocational training, medical public health and veterinary assistance and the propagation and demonstration of new ideas about agriculture, industries, etc.

Chapter III: Natural Resources—Describing their availability in the different sub-regions of the district, indicating the extent to which these are being properly conserved and efficiently utilised.

Chapter IV: Administrative and Institutional Structure—Giving an account of the administrative structure and the inter-relationship between different department wings and the situation in respect of the delegation of authority in the planning and execution of various programmes. Also describing the functions, structure, financial viability and record of performance of the important statutory and voluntary institutions, particularly Panchayati Raj Bodies, Local Self-Government Institutions and Cooperatives.

Chapter V: Economic Activities—Describing the variety of primary and secondary economic activities going on in different sub-regions of the district and bringing out their present level of development, their technological efficiency and the problems faced by them particularly with reference to marketing, credit, storage, processing, servicing and input-supply facilities and the availability of requisite raw materials, skilled labour and entrepreneurial resources.

Chapter VI: Problems of Employment—Analysing the position regarding the present availability and the emerging trends of employment in primary and secondary sectors in relation to the number of people (particularly landless labourers, craftsman and unskilled urban labour) available for employment, their level of technological sophistication and the adequacy or otherwise of their real or monetary wages.

Chapter VII: Problems of Backward Communities—Describing the peculiarities of their social-cultural organisation, their livelihood pattern, their rights to use of land and forest resources, the level of educational and technological proficiency attained by them and their access to the facilities and services provided by the Government and other development institutions.

Chapter VIII: Critical Appraisal of the Ongoing Development Schemes—Plan and non-Plan, in the context of economic and social objectives/activities these are to subserve, with a view to determine which of these should be continued/enlarged with or without modifications.

Chapter IX: Local Mobilisation of Resources—Estimating the local resources likely to be available from the private and institutional sources for different programmes during the next five-year/one-year period.

SECTION II—PLANNING FOR DEVELOPMENT

Chapter X: The Long Term Perspective—Indicating the prospects for different sub-regions based on the present trends of economic development, the availability of natural resources, the present and the projected availability of infrastructural facilities and inputs, the emerging trends in the technologies of production particularly with reference to unit-size of production. Also a tentative identification of the large villages towns/cities which

are likely to emerge as the centres of trade, commerce, transport network and manufacturing activities.

Chapter XI: Priorities for the District Plan—Stating the *inter se* priorities to be accorded in various sub-regions of the district to the promotion of different economic activities in the long-term as well as the short-term perspective.

Chapter XII: Programmes for Backward Communities—Indicating the measures proposed for the accelerated and integrated development of the backward communities, scheduled castes and the landless or unskilled labourers inhabiting the district.

Chapter XIII: Programmes for Development—Describing the integrated strategy for different sub-regions to be followed during the plan period, indicating the interaction various factors or programmes envisaged and setting forth the specific steps to be taken to promote the development of various economic activities and the welfare of backward areas/communities, by way of:

- (i) extending infrastructural facilities;
- (ii) promoting better utilisation/conservation of natural resources;
- (iii) providing, reorganising or relocating specific social services; and
- (iv) strengthening the administrative and institutional structure.

Chapter XIV—Resources for the Plan—Giving the year to year phasing of the physical, financial and specialised labour requirements for the measure envisaged under the plan and the manner in which these would be mobilised internally or externally.

Chapter XV—Issues for the State Government—Indicating the action required at the state level to promote the development of the district, with particular reference to the state superstructure and the statutory, fiscal and administrative policies regulating various economic activities, institutions, land tenure and employment.

APPENDIX C

A NOTE ON TRAINING DISTRICT PLANNERS

The purpose of this brief note is not to develop a detailed course for district level planners but merely to draw attention to some of the issues involved in designing such a course and offer some suggestions for a district planning training programme.

It will be recalled that in discussing what ought to be the major ingredients of district planning, a special case of regional planning, in Chapter 2 we had assumed that planning expertise was likely to be almost non-existent at the district level. This assumption was later borne out by the evidence from our field enquiry which we reported in Chapter 4. This scarcity of district planners or those conventionally known as regional planners—cannot be looked at in isolation from the existing state of regional planning itself. Suggesting this 'systems' view where demand, supply and training of regional planners is seen as a part of the total regional planning problem, Perloff (1971) has spelt out a problem which was first identified by Kuklinski (1969). He has argued that regional planning is, as yet, an uncharted profession where one is not quite certain either about the specific tasks of the regional planner or about the activities to which he should address himself or even about the likely range of demand for such professional regional planners. This complete uncertainty he attributes to the fact that regional planning itself is still a concept which has yet to prove its value. Consequently, the fortunes of regional planning will depend largely on the extent to which the key-decision makers on the strategy of national economic planning accept the concept of regional planning and apply it in practice.

Viewed in this background, training programmes for district planners must be based on the following considerations: (a) There is no established market for regional planners. At best one can think in terms of a future market, thrown up by the development of regional planning. Consequently, present programmes of training will have to be closely linked up with the district planning programmes themselves. (b) A related factor which should have important bearing on the course content is that in training district planners our urgent interest is not so much in producing academic

specialists in the field of regional analysis as in building up large numbers of trained groups which can develop operationally satisfactory district plans. (c) Given the emphasis on operational usefulness and close linking up with existing district planning programmes, the course content will naturally have to be closely geared to the activities that actually come within the domain of district planning. It is to be noted in this context that the type of regional planning the district planner is concerned with is not planning of a special area, *e.g.* river valley projects but rather the planning of total development in any kind of area. Consequently, his training must be sufficiently broad-based to cover the entire range of economic and social activities which will come within the purview of district planning. (d) One of the key objectives of the regionalisation process is to arrive at plans which are more realistic and give greater thrust on implementation. Thus the kind of planner we are interested in is one who is 'result oriented'. Consequently the desired training programme must allow for as much exposure to political systems and public administration as to the techno-economic dimension of a regional plan (Perloff: 1971).

(e) Finally there is the inevitable question of whether training should be generalised or specialised. In a recent paper Kuklinski (1971) has identified five major types of regional planners:

- (i) Regional futurologists,
- (ii) Inter-regional Planners,
- (iii) Interlocal Planners,
- (iv) Locational Planners, and
- (v) Regional Statisticians.

For each of these categories he has discussed their specific training requirements. The district planners should probably be classed in his category of interlocal planners. Kuklinski has discussed the inadequacy of the odd mixture of land use planning, community development and macro-economic planning which has till recently made up the course content of training programmes for this category. However, a question which arises prior to that of the appropriate course for interlocal planners is the advisability of developing such specialised categories of planners. As Kuklinski himself has argued, in the developing countries at least a vertical integration of training for the different types of planning tasks into a single programme for the same planner seems the

most workable approach. Perhaps this would be desirable even in the developed countries.

In view of the foregoing issues, a few guidelines come to mind easily. First of all it is quite clear that training for district planning should not concern itself with post-graduate and doctoral programmes which both Perloff (1971) and Kuklinski (1971) seem to have emphasised. While such courses in universities have a value of their own, training programmes directly related to the task of district plan formulation have little to do with them. Training for district planning must focus on training administrative personnel who are already on the job in the districts. The immediate need is precisely to offer in-service training to those people who are going to formulate our district plans today and during the next few years.

However if such training is to effectively equip our district planners with expertise enough to produce reasonably good plans then these programmes will have to be sufficiently wide based to cover all the activities coming within the scope of district planning and at the same time be adequately intensive to enable the trainees to actually apply the tools they have picked up during the training programme. While this immediately rules out the adoption of short duration courses of a few weeks, it also raised the problem of long periods of leave from normal duties for the trainees.

Perhaps the most suitable solution is to offer training to complete teams of district planners with some members being trained more intensively in certain areas than others. Minimising the length of the training period in this way, training programmes of four to eight months (eight in case of a research project and field work is included in the programme) can be offered. An illustrative distribution of courses between members of the district planning team is suggested in the accompanying chart (see overleaf).

A COURSE OUTLINE FOR DISTRICT PLANNERS

	<i>Economists</i>	<i>Sociologists</i>	<i>Quantitative Analysts</i>	<i>Physical Planners</i>	<i>Industrial Planners</i>	<i>Rural Planners</i>	<i>District Administrators</i>
<i>A. Analysis</i>							
Techniques of Economic Analysis	R	—	R	—	—	—	—
Techniques of Spatial Analysis	R	R	R	R	O	O	O
Demographic Analysis	O	R	O	—	—	—	—
<i>B. Planning</i>							
Strategies of Planning	R	R	R	R	R	R	R
Models for Planning	R	—	R	—	—	—	—
Programming	O	—	O	O	O	O	—
Project Evaluation	R	—	R	R	R	R	R
Planning for Selected Sector*	R	R	R	R	R	R	R
<i>C. Implementation</i>							
Network Techniques	O	—	R	O	O	O	R
Performance Budgeting	R	—	R	R	R	R	R
Legal Environment	—	R	—	R	R	R	R
Procedures	—	—	—	R	R	R	R
Cooperatives	O	R	—	—	—	R	O
Industrial Estate	O	—	—	R	R	—	O
Organisation	—	R	—	—	O	O	R

R and O stand for 'required' and 'optional'

*Different subgroups would be introduced to different sections, e.g., agriculture-economists, sociologists, rural planners, administrators.

APPENDIX D

IRRIGATION GUIDELINES
IRRIGATION DEPARTMENT

S

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A

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(State Government)

GUIDELINES FOR THE
PREPARATION OF DISTRICT PLANS

INVESTIGATION AND PLANNING CIRCLE—I

July, 1973.

Dr.
Superintending Engineer

D.O. No.
Investigation & Planning Circle, I.

Dated : July 7, 1973.

Subject : **DISTRICT PLANS**

My Dear

It has been decided to nominate you as the Executive Engineer incharge of the preparation of District Plan of the District..... because your Division is in a position to compile the district plans efficiently and expeditiously.

- (1) The first step in formulating the district plans would be the preparation of a 1"=1 mile map of the district in which besides normal features like roads, railways, important towns, rivers, etc., all the existing and proposed irrigation facilities like dams, reservoirs, bunds, bundhies, canals, lift canals, tubewells and flood protection and drainage improvement works should be marked (see items 1 of data sheet). The map should also indicate the area covered/benefited by such facilities. This map (6 copies) should be submitted to Shri..... Executive Engineer, PP II, Engineer-in-Chief's office in a fortnight's time when a meeting will be held to examine them.
- (2) The second step would be the collection of data as per enclosed data sheet. A set of proformas on which some of this data would be collected is enclosed. The list of data may be taken as a questionnaire and reply to each and every point should be covered in the form of a narrative. This information should be collected and compiled from various officers incharge of irrigation works. Part of the information contained in the list will have to be collected from district authorities like A.D.M. (P)/D.P.O., District Statistical Officer, Land Record Office, District Agriculture Officer and Officers of Minor Irrigation and Rural Engineering Services. This data will be discussed in a meeting to be held in about four weeks' time.

The Engineer-in-Chief is very keen that the District Plans required should be formulated at a very early date. You are, therefore, requested to kindly pay your personal attention to this work and complete it within the prescribed time-schedule.

Encl: *As above*

Yours sincerely,

()

Shri
Executive Engineer,
.....Division,
.....

No.....of date.....

My dear

I send you a copy of the above for your kind information and necessary action. You are requested to kindly ensure that the preparation of District Plans progresses according to schedule laid down above.

Encl : *As above*

Yours sincerely,

()

Shri
Superintending Engineer,
.....Circle,
.....

DATA SHEET

GUIDELINES FOR THE COLLECTION OF DATA AND FORMULATION OF DISTRICT PLANS

1. Map.

The following details may be marked on a 1"=1 mile map of the district.

- (i) District (orange thick-dashbar), Tehsil (orange thin-dashbar) and block boundaries (yellow thin-dashbar) with their names.
- (ii) All rivers (blue shaded), main nalas (black line), roads (thick burnt sienna firm for pucca and dotted for kacha), towns (red block), railways (black crossed) with their names.
- (iii) Existing irrigation works with their names and channel systems like dams (black), canals (thick blue), bundhies (black blue), tanks (black blue), tubewells (blue circle), and lift canals (black blue).
- (iv) Existing flood protection (dark brown firm) and drainage improvement facilities (thick black firm).
- (v) Future proposals (all in red firm or dotted as necessary).
- (vi) Command area as at present and as proposed be also marked (green firm—present and green dotted—future).
- (vii) Pockets for development of irrigation separately by canals, tubewells and lift schemes be shown in different shades along with flooded areas.

2. Collection of data.

- (i) Total Geographical, culturable and cultivated area of district.
- (ii) Topography
 - (a) Type of soils
 - (b) Areas under different land classification, *e.g.*, hilly, plateau, desert, etc.
 - (c) Climate
- (iii) Water-table (Proforma I enclosed), water-logging and drainage problems if any, including, the details of area affected.

- (iv) Area affected by floods (also mark on map in light yellow).
- (v) Total cropped area during last five years separately for each crop, also indicating area shown more than once (Proforma II enclosed).
- (vi) Irrigated area during last 5 years separately for (Proforma III enclosed).
 - (a) Canals/Lift canals
 - (b) State tubewells
 - (c) Other state irrigation works, e.g., bundhies, tanks, etc.
 - (d) Private sources.
- (vii) Present sources of irrigation
 - (a) Canals : The names of main canals, distributries and branches, etc., lengths and discharge of canal systems and C.C.A. and proposed area under each (Proforma IV enclosed).
 - (b) Similarly for State tubewells, lift canals, bundhies, tanks and private irrigation works. (Proforma IV enclosed).
- (viii) Details of flood protection works and drainage improvement schemes with their salient features and area relieved. (proforma IV enclosed)

Note: The above information will be collected separately for each work.

- 3. Details of schemes likely to be completed to the end of IV plan with their salient features, C.C.A. and potential. The schemes should include all state and private works. (Proforma V enclosed).
- 4. Proposals for fifth five year plan.
 - (i) Major and medium irrigation schemes:
 - (a) Salient features (Proforma V).
 - (b) C.C.A. covered by them.
 - (c) Total potential anticipated.
 - (d) Potential anticipated by fourth and fifth plan end.
 - (ii) Minor irrigation schemes including lift canals.
 - (a) Salient features (Proforma V).

- (b) C.C.A. covered by them.
 - (c) Potential anticipated by fourth and fifth plan end.
- (iii) State tubewells.
 - (a) Total nos.
 - (b) C.C.A. covered by them.
 - (c) Potential anticipated by fourth and fifth plan end.
- (iv) Private irrigation works.
 - (a) C.C.A. covered by them.
 - (b) Potential anticipated by fourth and fifth plan end.
- (v) Flood protection schemes during fifth plan with their salient features (Proforma V) and area benefited.
- (vi) Drainage improvement schemes during fifth plan with their salient features (Proforma V) and area benefited.
- (vii) Schemes for areas having water logging and salinity problems.

5. General

- (i) Proposals for future irrigation schemes.
 - (ii) Proposals for flood protection, drainage, anti-water logging and anti-salinity schemes for future.
 - (iii) Other special features of the district requiring special consideration.
- 6. A note dealing with the ultimate irrigation requirements of the District, the potential so far achieved (end of IVth plan) potential to be created during Vth plan and potential remaining to be covered in VIth and subsequent plans.
- 7. The salient features of existing and proposed schemes may be sent in the proforma V enclosed.

PROFORMA I

SPRING LEVEL OF WELLS FOR LAST FIVE YEAR IN

DISTT.....FROM 19.....TO 19.....

Line No.

Well No.

Name of Well

Name of Village

R.L. of Ground

Year/Depth of Water in feet

19....May

Oct.

19....May

Oct.

19....May

Oct.

19....May

Oct.

19....May

Oct.

Executive Engineer

..... Division

.....

Note: The spring level lines should be so selected that they cover the entire District. Thus 4 and 5 lines may be sufficient. Such lines should also be marked on the map.

PROFORMA II

CROPPING PATTERN OF DISTRICT FROM...F...TO...F (19 TO 19)

Sl. No.	Name of Tehsil	Gross Area	Waste Area	Culturable Area	Fasli	Year	Cropped Area in Kharif			
							SC	Rice	Others	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Cropped Area in Rabi							Total Gross Cropped		Net Cropped Area	
Wheat	Barley	Gram		Other: Rabi	Total	Area (11 + 16)				
		(13)	(14)			(15)	(16)	(17)	(18)	
(12)	(13)	(14)	(15)	(16)	(17)					

Executive Engineer

.....Division

.....

Note: The figures should clearly indicate the Gross area, Culturable area, Cultivated/sown area (Net cropped area) and area sown more than once (gross cropped area) of the District.

PROFORMA III
IRRIGATION STATISTICS OF DISTRICT

Year	Fasli	Name of work	C.C.A.	Proposed Area		Irrigated Area Kharif				Irrigated Area Rabi					
				Kharif	Rabi	Total	SC	Rice	O.K.	Total	Wheat Bar- Gram O.R. Total ley				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)

1968-69

1969-70

1970-71

1971-72

1972-73

Executive Engineer

.....Division

.....

Note: Give figures separately for each item, viz. (a) Main canal, (b) Dye and Mrs., (c) Lift canals, (d) Tube wells, (e) Other sources including private works.

PROFORMA IV

DETAILS OF IRRIGATION WORKS IN DISTT.....

Sl. No.	Name of Channel	Length	Point of off take	Right/ Left	Discharge	C.C.A.	Proposed Area	
							Rabi	Kharif
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

Executive Engineer

.....Division

.....

- Note:*
1. Separate proformas to be filled in for canals, tubewells, lift canals, bundhies, tanks and other works.
 2. The data for dams, reservoirs, bundhies and tanks, etc., should include length, max. storage capacity and submergence also.
 3. The data for flood protection and drainage improvement schemes should include name of river, length, carrying capacity, height and area benefited, etc.
 4. All these works must be marked on the map.

PROFORMA V

**SALIENT FEATURES OF IRRIGATION, FLOOD
CONTROL AND DRAINAGE IMPROVEMENT
SCHEMES CONSTRUCTED OR COMPLETED
DURING IV PLAN AND THE NEW SCHEMES
PROPOSED FOR 5TH PLAN, ETC.**

Name of Scheme :

Short Note :

DETAILS

1. Location, w/z., tehsil and district.
2. Name of river.
3. If a dam, bundhi or tank, its length, max. ht. storage capacity (gross and live) submergence be given.
4. If a lift canal, its length, discharge to be pumped and lifting head be given.
5. If a flood protection and drainage improvement scheme, name of river, length, carrying capacity, and area benefited be given.
6. If a canal, its length, discharge, CFA, proposed area and details of channel system be given.
7. Gross area.
8. C.C.A.
9. Proposed area:
 - (a) Rabi
 - (b) Rice
 - (c) S.C.
 - (d) O.K.

Total

10. Estimated cost.
11. Cost per acre.
12. Benefit cost ration.
13. Likely date of completion.

Note: Give separate statement for each work.

Selected Bibliography

1. Adrezej, W. (1967)
Perspectives and Limitation of the Application of Mathematical Methods in Economic Regionalisation. In Proceedings of the 4th General Meeting of the Commission on Methods of Economic Regionalisation of the International Geographical Union, Prague, 1967.
2. Alagh, Y.K. (1972)
Spatial Economic Planning Models in India (mimeographed). Contribution to Planning Commission (1974b).
3. Alagh, Y.K., Subramaniam, K.K. & Kashyap, S.P. (1971)
 Interregional Industrial Structure in a Developing Economy : A Conceptual of Frame with a Case Study. *J. of Regional Studies*, Dec. 1971.
4. Alonso, W. (1964)
Location Theory. In Friedman & Alonso (1964).
5. Arrow, K.J. & Hurwicz, L. (1960)
 Decentralisation & Computation in Resource Allocation. In Pfouts, R.W. (ed.), *Essays in Economics & Econometrics*.
6. Bardhan, P. (1974a)
 On 'Welfarism' vs. 'Radicalism' in Planning. *Econ. & Political Weekly*, IX, 9, March 2, 1974.
7. Bardhan, P. (1974b)
 Inequality of Farm Incomes—A Study of Four Districts. *Econ. & Political Weekly*, IX, 6-8, Annual No., 1974.
8. Barone, E. (1908)
 The Ministry of Production in the Collective State. *Giornale Degli Economist*.
9. Berry, B.J.L., *Essays on Commodity Flows & the Spatial Structure of the Indian Economy.* Deptt. of Geography. Research Paper No. III, University of Chicago. 1966.

10. Bhat, L.S.
Regional Planning in India. Statistical Publishing Society, Calcutta.
11. Bhat, L.S. & Das, B.N. (1967)
Regional Physical Complexes for Agricultural Landuse Planning. Discussion Paper No. 23. I.S.I. Regional Survey Unit, New Delhi, 1967.
12. Bhatia, S.S. (1967)
Spatial Variation, Changes and Trends in Agricultural Efficiency in Uttar Pradesh, 1953-63. *Indian J. of Agri. Econ.*, Vol. 22, 1967.
13. Boudeville, J. (1961)
A Survey of Recent Techniques for Regional Economic Analysis. In Isard & Cumberland J.H. (1961).
14. Brahme, S. (1971)
Regional Planning in India. In Census of India (1971).
15. Cao, Pinna V. (1961)
Problems of Establishing & Using Regional Input Output Accounting. In Isard & Cumberland, J.H. (1961).
16. Census of India (1971)
Economic & Socio Cultural Dimension of Regionalisation. Census Centenary Monograph No. 7, Office of Registrar General of India, Ministry of Home Affairs, New Delhi, 1971.
17. Chakravarty, S. (1972a)
The Planning Process in India : An Appraisal and a Framework (mimeographed). Planning Commission, New Delhi, 1972.
18. Chakravarty, S. (1972b)
A Note on the Structure of Multi-level Planning for India (mimeographed). Planning Commission, New Delhi, 1972.
19. Chauhan, K.K.S., Mundle, S., Mohanan, J. & Jadhav, D. (1973)
Small Farmers: Problems and Possibility of Development. Indian Institute of Management, Ahmedabad, 1973.
20. Dayal, I. (1973)
Organisation for Public Policy in Government (mimeographed). Paper presented to 17th Annual Conference, Oct. 30, 1973. Indian Institute of Public Administration, New Delhi.
21. Dunham, D.M. & Hilhorst, J.G.M. (1971)
Issues in Regional Planning. Institute of Social Studies, Mouton & Co., 1971.

22. Dutta Choudhury, M. (1971)
Regional Planning in India. In Dunham & Hillhorst (1971).
23. Dutta, Choudhury, M. (1973)
A Methodological Note on Spatial Planning in India (mimeographed).
Contribution to Planning Commission (1973b).
24. Ford Foundation (1973a)
Draft Plan for Integrated Area Development. Selco Block, Wardha District. Maharashtra Central Research Cell, Growth Centres Project.
- 24a. Ford Foundation (1973b)
Draft Plan for Integrated Area Development. Turkaulia Block, Champaran District. Bihar Central Research Cell, Growth Centres Project.
25. Ford Foundation (1974)
Guidelines for Block Level Planning. Central Research Cell. Growth Centres Project.
26. Friedman, J. & Alonso, W. (ed.) (1964)
Regional Development and Planning: A Reader. M.I.T. Press, Massachusetts, 1964.
27. Gadgil, R.D. (1967)
District Development Planning. G.I.P.E. Poona, 1967.
28. Gavor, D. (1968)
Open Ended Planning. In Perspectives of Planning, O.E.C.D., Paris, 1968.
29. Gidadhubli, R.G. & Bhat, L.S. (1971)
Economic Regions and Regional Flows—a Case Study in the Flow Patterns and Trends in Selected Commodities in India. In Census of India (1971).
30. Gille, F.B. (1967)
Basic Thinking in Regional Planning. Mouton & Co. (1967).
31. Government of India (1972). *Report of the Irrigation Commission*, Vol. I, Ministry of Irrigation & Power, New Delhi, 1972.
32. Hicks, U. (1961)
Development from Below: Local Government & Finance in Developing Countries of the Commonwealth, Clarendon Press. Oxford, 1961.

33. Inamdar, N.R. (1973)
District Planning in Maharashtra. Paper presented to a seminar on District Planning. Indian Institute of Public Administration, Maharashtra Branch, Bombay, 1973.
34. Isard, W. (1960)
Methods of Regional Analysis: An Introduction to Regional Science. M.I.T. Press, Massachusetts, 1960.
35. Isard, W. & Chatterjee, M. (1969)
Potentiality of Regional Science Methods and Techniques in Attacking Indian Regional Problems. Paper presented to Kharaghpur Seminar of Regional Science Association of India, 1967.
36. Isard, W. & Cumberland, J.H. (ed.) (1961)
Regional Economic Planning—Techniques of Analysis. O.E.E.C., 1961.
37. Isard & Cumberland, J.H. (1961a)
A Synthesis of Operational Methods in Regional Analysis. In Isard & Cumberland (1961).
38. Kantorovich, C.L.V. (1964)
The Best Use of Economic Resources. Translation by P.F. Knights field, Edited by G. Morton, Oxford, Pergamon, 1965.
39. Kornai, J. (1965)
Mathematical Programming as a Tool of Socialist Economic Planning. In Nove, A. & Nuti, D.M. (ed.) *Socialist Economics*, Penguin, 1972.
40. Kornai, J. (1967)
Mathematical Programming in Hungary. In Malinvaud & Bacharach (ed.) *Activity Analysis in the Theory of Growth & Planning*.
41. Kornai & Liptak (1963)
 Two-Level Planning. *Econometrica*, Vol. 33.
42. Kuklinski, A.R. (1971)
Education for Regional Planning. In Dunham & Milhorst (1971).
43. Kuklinski, A. (ed.) (1972)
Growth Poles & Growth Centres. Mouton & Co., 1972.
44. Kutty, M.G. (1968)
Metropolitan and Regional Planning—Problems of Organisation. In *Urbanization in Developing Countries*, International Union of Local Authority, 1968.

45. Lakdawala, D.T., Alagh, Y.K. & Sharma, A. (1972)
Regional Variation in Industrial Development (mimeographed).
46. Lange, O. (1963)
On the Economic Theory of Socialism. *Review of Economic Studies*, Vol. 4.
47. Losch, A. (1954)
The Economics of Location. Yale University Press, New Haven, 1954.
48. Maharashtra, Planning Department (1973)
Methodology of Arriving at the Share of the District in Financial Allocation for the Fifth Five Year Plan. Planning Department, Government of Maharashtra, 1973.
49. Malassis, C. (1961)
The Relationship Between Farm Analysis and Regional Economic Studies. In Isard & Cumberland (1961).
50. Malhotra, D.K. (1965)
Planning Techniques in India, Problems of Area Development—Need for Scientific Area Surveys. *Major Industries of India*. Annual Number, 1964-65.
51. Malinvaud (1967)
Decentralised Procedure for Planning. In Malinvaud & Bacharach (ed.) *Activity Analysis in the Theory of Growth & Planning*.
52. Marshack, J. & Marshack, T. (1959)
Centralization and Decentralization in Economic Organization. *Econometrica*, July 1959.
53. Martin, A. & Williams, E. (1971)
Agricultural Planning—Focus on Regional Constraints, *Econ. & Pol. Weekly*, VI. 30-32, Special No. 1971.
54. Masser, I. (1972)
Analytical Models for Urban & Regional Planning, David & Charles, Newton Abbot, 1972.
55. Mathur, M.V. & Narain, I. (ed.) (1969)
Panchayati Raj, Planning & Democracy, Asia Publishing House, 1969.
56. Mathur, O.P. (1973)
Planning for Districts: Some Problems in Developing a Conceptual Framework. *Prajnan*, Vol. II, No. 3, July-September, 1973.

57. Mayer, J. (1968)
Regional Economics—A Survey, In Needleman (1972).
58. Millikan, M.F. (1967)
Comments on Methods of Reporting & Evaluating Progress Under Plan Implementation. In Planning and Plan Implementation, United Nations Publication, New York, 1967.
59. Misra, R.P. (1972)
Growth Poles and Growth Centres in the Context of Indian Urban and Regional Development Problems. In Kuklinski (1972).
60. Mundle, S. (1974)
Relief Planning : An Aspect of Drought in Maharashtra. *Indian Journal of Economics*, Vol. LV, part 1, No. 216, July 1974.
61. Nath, V. (1969)
Planning by Panchayati Raj Institutions. In Mathur, M.V. & Narain, I. (1969)
62. Nath, V. (1971)
Regional Development Policy. *Economic and Political Weekly*, VI, 30-32, Special No. 1971.
63. Needleman, L. (ed.) (1972)
Regional Analysis, Penguin, 1972.
64. North, D.C. (1955)
Location Theory and Regional Economic Growth. *J. of Political Economy*, Vol. 63, June 1955.
65. Pal, M.N. & Learmouth, A.C.A. (1964)
An Appraisal of the Regionalisation of Economic Development of India. Australia & New Zealand Association for Advancement of Science, Canberra 1964.
66. Paranjape, H.K. (1969)
Planning from Below—Why & How. In Mathur & Narain (1969).
67. Patil, G.P.,
District Area Development. *Indian Journal of Public Administration*, XII, 3, July-September, 1966.
68. Perloff, H.S. (1971)
Education for Regional Planning in Less Developed Countries. In Dunham & Hilhorst (1971).
69. Perroux, F. (1950)
Economic Space—Theory & Application. *Quarterly J. of Economics*, Vol. 64, February 1950.

70. Planning Commission (1969)
Guidelines for the Formulation of District Plans. Planning Commission, G.O.I., New Delhi, 1969.
71. Planning Commission (1970)
Report of the Committee of Experts on Unemployment Estimates, Planning Commission, G.O.I., New Delhi, 1970.
72. Planning Commission (1973a)
Approach to the Fifth Year Plan, 1974-79. Planning Commission, G.O.I., New Delhi, 1973.
73. Planning Commission (1973b)
Report of Working Group on Conceptual Framework on Multilevel Planning & Spatial Analysis (mimeographed). Planning Circular No. PC (P) 9/46/WG/cf/72-MLP 22.1.1973.
74. Planning Commission (1973c)
Draft of Fifth Five Year Plan 1974-79. Planning Commission, G.O.I., New Delhi, 1973.
75. Popov, I.V. & Komar, I.V. (1962)
Certain Problems of Scientific Study of Economic Regionalisation of India for Purposes of Planning, I.S.I., 1962.
76. Prasad, P.H. (1972)
Economic Benefits in the Kosi Command Area. A.N.S. Institute of Social Studies, Patna, 1972.
77. Raj, K.N.
Planning from Below with Reference to District Development & State Planning. *Economic & Political Weekly*, VI, 30-32, Special No, July, 1971.
78. Raj, Krishna, (1973)
Unemployment in India. *Indian Journal of Agricultural Economics*, January 1973.
79. Rao, S.K. (1973)
A Note on Measuring Economic Distances Between Regions. *Econ. & Pol. Weekly*, VIII, 17, April, 1973.
80. Rao, V.K.R.V.
District Planning Concept—Getting to the Grass Roots. *Times of India*, May 23, 1973.
81. Rao, V.L.S.P. & Bhat, L.S. (1960)
Planning Regions in Mysore State: The Need for Readjustment of District Boundaries, I.S.I., Calcutta (1960).

82. Rosenstein, Rodan, P.N. (1961)
How to Industrialise an Underdeveloped Area. In Isard & Cumberland (1961).
83. Rossi, Doria M. (1961)
Analysis of Agricultural Structure for Regional Planning. In Isard & Cumberland (1961).
84. Roy, B.K. (1971)
An Approach to Rationalisation of Type of Farming in India. In Census of India (1971).
85. Roy, Burman B.K.
Towards an Integrated Regional Frame. In Census of India (1971).
86. Romin, M.S. (1971)
Mineral Resources of India and Their Role in Region Formation. In Census of India (1971).
87. Saroop, A. (1972)
District Planning for Integrated Development (mimeographed). Planning Commission, New Delhi, 1972.
88. Sau, R. (1971)
Multi-level Planning. *Econ. & Pol. Weekly*, VI. 33, 1971.
89. Sauskhin, Yu. G. (1964)
An Approach to the Economic Geographic Modelling of Regional Territorial—Production Complex. *Soviet Geography* No. 10, 1964.
90. Sen, A.K. (1973)
Poverty, Inequality & Unemployment: Some Conceptual Issues in Measurement. *Economic & Political Weekly*, Vol. VIII, No. 31-33, Special Number, 1973.
91. Sen, L.K., Tripathy, R.N., Misra, G.K. & Thaha, A.L. (1975)
Growth Centres in Raichur. National Institute of Community Development, Hyderabad, 1975.
92. Sengupta, P. (1962)
Regions for Planning in India. *Nat. Geog. Journal of India*, VIII, I. 1962.
93. Sharma, P.S. (1973)
Agricultural Regionalization of India. Delhi, 1973.
94. Simon, H. (1960)
The New Science of Management Decision, New York, 1960.

95. Stone (1961)
Social Accounts at the Regional Level. In Isard & Cumberland (1961).
96. Taylor, F.M. (1929)
The Guidance of Production in a Socialist State. *American Economic Review*, Vol. 19, No. 1.
97. Thomas, M.D. (1972)
The Regional Problem, Structural Change & Growth Pole Theory. In Kuklinski (ed.).
98. Tiebout, C.M. (1956)
Exports & Regional Economic Growth. *Journal of Political Economy*, Vol. 64, April 1956.
99. Tinbergen, J. (1968)
Links Between National Planning and Town and Country Planning. In 'Urbanisation in Developing Countries', International Union of Local Authorities, The Hague, Netherlands, 1958.
100. United Nations (1968)
Regional Planning. Department of Economic & Social Affairs, New York, 1959.
101. Uzawa, H. (1958)
Iterative Methods of Concave Programming. In K. Arrow et. al., *Studies in Linear & Non-Linear Programming.*
102. Vyas, V.S. (1969)
Decentralised Planning. In Mathur & Narain (1969).
103. Weismann, E. (1968)
Relationship of Planning and Implementation. In 'Urbanization in Developing Countries', International Union of Local Authorities, 1968.